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ESTABLISHED 1889

**F. A. GUERNSEY  
& CO., INC. • • • •**

THE SCHOHARIE NURSERIES  
SCHOHARIE, N. Y. • • • •



## INTRODUCTION

THE nursery was founded in 1889 by Mr. F. A. Guernsey. Mr. Guernsey had been a nursery salesman for a Western New York concern before he decided to start his own nursery. The first fruit trees were grown at Schoharie where the nursery has operated ever since. The soil in the Schoharie Valley is particularly noted for its fertility, being a rich clay loam which produces **heavy, fibrous root systems** in our trees and plants. The business grew rapidly as people over an ever increasing area in Eastern New York began to demand Schoharie Valley grown nursery stock.

As the business grew Mr. Rockefeller who, for a long time now has been effective in its development, was added to the personnel. The business was incorporated in 1916 and at that time we began to grow ornamental trees and plants more extensively. Since the demand for ornamental nursery stock has increased so greatly in the last few years we are now devoting almost half our total acreage (100 acres) to the growing of evergreens, shade trees, shrubs, perennial plants, vines and other plant materials for landscape use. At the same time we have not neglected to increase and improve our list of fruit trees and small fruits. For instance, we were about the first nursery in New York State to offer the Cortland apple to the public in quantity.

Our business has been built up largely by personal contact with our clientele, either through salesmen or members of our concern. We have great faith in this method of reaching our customers, because a well instructed and intelligent representative can render better service than the best catalogue. He understands your needs and his expert advice and capable suggestions will be valuable to you.

It has been our aim in this catalogue to present a complete list of the plants we are growing with short accurate descriptions. We wish to emphasize the fact that we are actually growers of, and not dealers in, nursery stock. We can prove this to you if you will visit our nursery and let us show you around the grounds. In short, we stand back of our stock to the extent of gladly making replacements where we feel that the claims for such are justified, although the only guarantee we make is that the plants will be true to name and up to the grade as ordered, and will arrive in fresh condition.

Following is a sample of the many letters we receive from satisfied customers.

July 18, 1935

"Enclosed please find my check for \$24.60, the balance of my account.

I want to thank you for the splendid relations we have had in this transaction, as in all others in which we have been parties. The new trees and bushes are flourishing, and bid fair to be great additions to our property."

Very truly yours,  
Frederick J. Baum, Poughkeepsie, N. Y.  
(Rev. F. J. Baum, D.D.)

Nursery stock of proven high quality, proper equipment, a trained staff and forty-five years experience are the qualifications we offer in soliciting your trade. We will naturally appreciate any suggestions you can give as to how we may improve our service.

## EVERGREEN TREES

THE use of evergreens as all-the-year, outdoor adornment is rapidly increasing in favor. The conifers, or large cone-bearing evergreens as shade and protection impart an atmosphere of companionship and snugness to the home. The smaller kinds are effective as screens or hedges, and the larger as windbreaks. The dwarf varieties planted about foundations and filling angles and nooks, give distinction and an effect of refinement not equalled by any other plants.

The great variety in shades of green, yellow and blue, and of growth habits, lend vast power to the landscape architect eager for effects, besides the more formal results obtained by shearing.

Evergreens are difficult to transplant and as much soil as possible should be listed with the roots, which must not be allowed to dry. Tramp earth firmly and keep well watered until established. With a little care, they may be transplanted freely.

### ABIES—Fir

Trees in this group are lofty, hardy, beautiful trees that are especially adapted to open spaces.

- A. balsamea** (Balsam Fir). A trim pyramidal tree of rapid growth. Noted for its pleasing pungent odor.
- A. concolor** (White Fir). Foliage of varying shades of dark green and blue. Stands dry weather well. The showiest of all firs.

### CHAMAECYPARIS—False Cypress

- C. pisifera aurea** (Golden Sawara Cypress). Bright yellow foliage in the spring. A quick grower.
- C. pisifera filifera** (Thready Cypress). Very graceful drooping branches of bright green. Grows 15 to 20 feet high.
- C. pisifera plumosa**. A slender tree reaching a height of 25 or 30 feet. Tiny, needle-like bright green foliage. Stands shearing well.
- C. pisifera plumosa aurea**. (Golden Plume Cypress). Foliage a warm yellow. Grows to a height of 20 to 25 feet.

### JUNIPERUS—Juniper

- J. Chinensis alba—variegata** (White leaved Chinese Juniper). Grows only 6 or 7 feet high.
- J. chinensis columnaris** (Columnar Chinese Juniper). A slender tapering tree about 20 feet high when mature. Soft grey green foliage. Very effective when sheared.
- J. chinensis pfitzeriana** (Pfitzer's Juniper). Very popular low growing, spreading tree. Dense feathery, grey green foliage. Very hardy and especially adapted to city conditions.
- J. communis depressa** (Prostrate Juniper). A low, broad-topped vase-shaped bush 3 to 4 feet high. Dark blue green foliage. Very hardy.
- J. communis depressa plumosa** (Plumed Prostrate Juniper). Feathery foliage which turns a rich bronze green in winter.
- J. communis suecica** (Swedish Juniper). Compact spire-like tree, about 20 feet at maturity. Very hardy. Thick green foliage.
- J. excelsa stricta** (Spiny Greek Juniper). Compact needle-like tree with grey green foliage. Very useful in formal arrangements.
- J. horizontalis** (Creeping Juniper). Dense low growing shrub with greyish green leaves. Excellent ground cover or rock garden plant.
- J. sabina** (Savin Juniper). Grows 3 to 4 feet high, spreading in irregular masses. Dense, dark green foliage.
- J. sabina tamariscifolia** (Tamarisk Juniper). Flat, spreading shrub about 18 inches high of soft, feathery texture.

**J. squamata meyeri**. A new introduction from China. Eventually reaches a height of 4 to 5 feet and equally as broad. Silvery blue foliage.

**J. virginiana** (Red Cedar). Most widely found evergreen in Eastern U. S. Tall growing, hardy, easily adapted to all conditions.

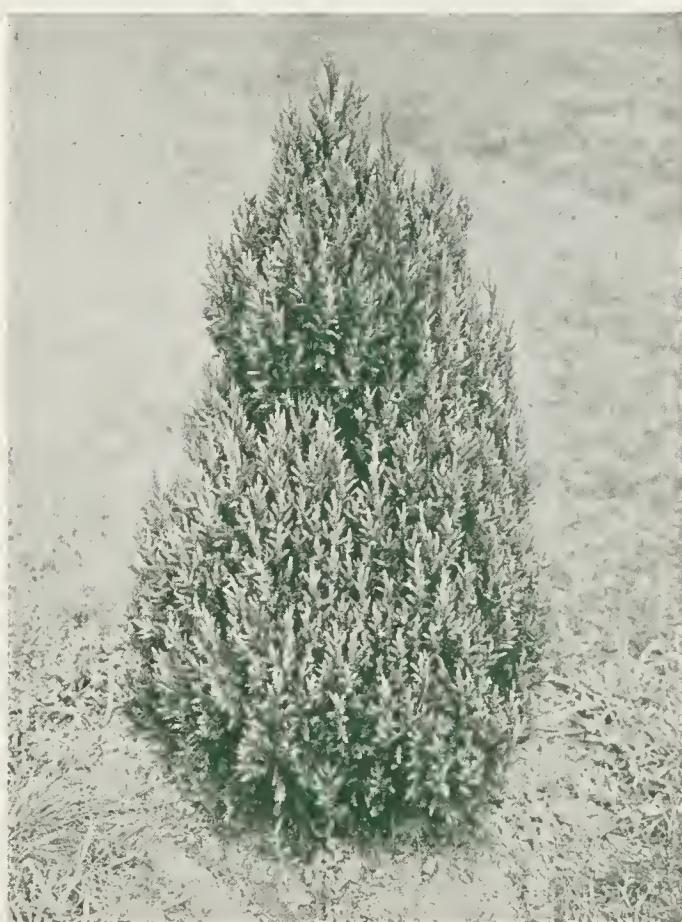
**J. virginiana glauca** (Silver Cedar). Narrow tree, seldom taller than 18 feet. Silvery blue foliage. Contrasts nicely with other evergreens.

### LARIX EUROPAEA

**European Larch**. A cone bearing tree shedding its leaves in the autumn. Grows 50 to 60 feet tall and very symmetrical. Handsome yellow green needles in the spring.

### PSEUDOTSUGA

**P. douglasii** (Douglas Fir). Rugged, enduring and permanent, often growing more than 60 feet high. Forms a broad, open pyramid of rich green often tinged a silvery blue.



Juniperus excelsa stricta  
(Spiny Greek Juniper)

## PICEA—Spruce

**P. excelsa** (Norway Spruce). The original Christmas tree. Useful for windbreaks or locations where quick growth is required.

**P. pungens** (Colorado Blue Spruce). Foliage varies from blue to dull green. A vigorous, handsome tree.

**P. pungens glauca** (Colorado Blue Spruce). An improved form of the above with dense steel blue foliage of even color.

**P. pungens kosteri** (Koster's Blue Spruce). Foliage a brilliant silvery blue. Rare and exceedingly beautiful tree.

**P. canadensis albertiana** (Alberta Spruce). Extremely hardy tree growing to 60 feet in height. A mass of silvery green.

**P. glauca conica** (Dwarf Alberta Spruce). Most distinct of Spruces. Blue green needles. Grows in perfect pyramidal shape to about 4 feet. Fine for rock gardens.

## PINUS—Pine

**P. nigra** (Austrian Pine). Long dark green needles. A quick growing tree of great hardiness and vigor. Thrives in any situation.

**P. montana mugus** (Mugho Pine). A flat spreading bush never growing much over 3 feet high. Fine for foundation plantings and rock gardens.

**P. resinosa** (Red or Norway Pine). Long dark green needles and light red bark. Extremely hardy. Very tall growing.

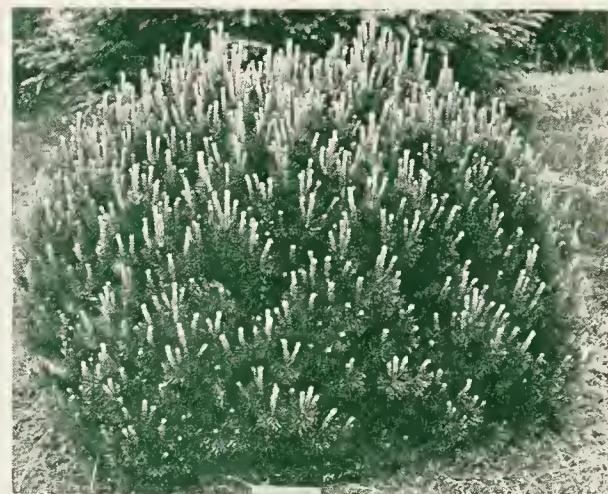
**P. strobus** (White Pine). The most useful of this family. It grows quickly and is a mass of dark green in its youth. 80 to 90 feet tall at maturity.

**P. sylvestris**. The Scotch pine is a hardy, rapid-growing tree, thriving in poor soil and severe climates; Short greyish green needles. Very picturesque.

**P. Tanyoshio** (Japanese Table Pine). Ideal for rock gardens growing only about 2 feet high. Old trees may attain a spread of 3 to 4 feet. Long slim light green needles, soft and flexible.



Pyramidal Arborvitae



Mugho Pine

## TSUGA—Hemlock

**T. canadensis** (American Hemlock). A well-known tall growing tree requiring plenty of room in the planting. Rich green foliage on drooping branches.

## TAXUS—Yew

**T. cuspidata capitata** (Japanese Yew). This is the tree form and best for specimen use. Brilliant green foliage turns almost black in winter.

**T. cuspidata** (Spreading Japanese Yew). Makes an open bush 5 to 8 feet high with dark green foliage with crimson fruits in the autumn. Fine as a hedge.

**T. cuspidata nana** (Dwarf Japanese Yew). Grows 2 to 3 feet high, thick blackish green foliage. Irregular spreading habit.

## THUJA—Arborvitae

**T. occidentalis** (American Arborvitae). Slender conical tree reaching a height of 30 or 40 feet. Stands shearing and is often used as a hedge or screen.



Taxus cuspidata capitata (Upright Yew)

## THUJA—Continued

**T. occidentalis douglasii pyramidalis** (Douglas Pyramidal Arborvitae). Slender tree 10 to 20 feet high with bronze yellow foliage.

**T. occidentalis elegantissima** (Golden-tipped Arborvitae). Lustrous green tree 10 to 12 feet high. Bright yellow shoots in early spring.

**T. occidentalis lutea** (Peabody's Arborvitae). Columnar tree about 10 feet tall with yellow foliage.

**T. occidentalis pyramidalis** (Pyramidal Arborvitae). Upright, columnar tree growing 15 to 30 feet high. Brilliant green foliage year around.

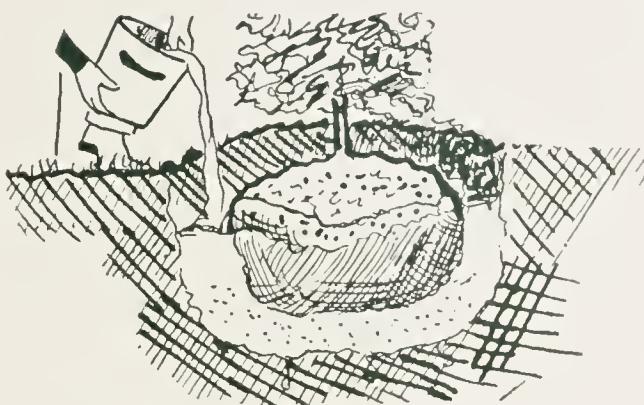
**T. occidentalis rosenthalii** (Rosenthal's Arborvitae). Columnar little tree attaining a height of 6 to 10 feet. Very hardy.

**T. occidentalis wareana** (Siberian Arborvitae). A pyramidal tree of 12 to 15 feet making a broad cone. Brilliant green.

**T. occidentalis woodwardi** (Woodward Arborvitae). A perfect globe tree that requires no shearing.

## PLANTING EVERGREENS

Place some good loamy top soil in hole and set tree a trifle lower than it stood in the nursery. Remove burlap or cut it away from the top as shown, as the remainder will soon rot away. Pack firmly by tramping and settling with water. Peat moss makes a fine mulch for evergreens and should be applied two inches thick around the trees.



## EVERGREEN SHRUBS

THESE are being used more and more in landscape work. Their leaf masses meet the demand for fresh green foliage to enliven and cheer the bare prospect in winter. But best of all is the magnificent display that most of them make in bloom, especially the Rhododendrons and Kalmias.

Another desirable quality is such a fondness for shady places that they meet a demand for beautifying these spots which are so difficult to adorn. They transplant easily, are hardy, give immediate results, and are highly satisfactory.

Once each year a handful or two of aluminum sulfate should be scattered around the **Rhododendrons** and **Mt. Laurels** to insure proper soil acidity. Also a mulch of peat moss should be kept around the plants.

Do not dig about the plants since they are largely surface rooting. All the native species are hardy as far north as Canada, but several of the hybrids are not reliably hardy in the North, unless thoroughly protected in winter.

**COTONEASTER horizontalis** (Rock Cotoneaster). Delightful little shrub with tiny pink flowers in spring. Scarlet berries in autumn and winter. Stands heat and drought well.

**DAPHNE cneorum** (Rose Daphne). Dwarf evergreen shrub producing masses of rosy pink flowers in May and June. Fine for rock gardens.

**KALMIA latifolia** (Mountain Laurel). Handsome shrubs that should be planted in groups for a beautiful pink mass effect. Entirely hardy and thrive in partial shade.

**AZALEA calendulacea** (Flame Azalea). A profusion of orange yellow or flame red flowers before the leaves appear.

**RHODODENDRON**. Plant in moist, sour soil with plenty of shade.

**maximum** (Great Laurel). Enormous bushes of pale pink and white flowers in May and June.

**catawbiense**. Compact clusters of dark purple flowers.

Very handsome.

**carolinianum**. Narrow foliage. Charming pink flowers in May and June.



## ORNAMENTAL AND SHADE TREES

TREES, especially, have a character that is instantly imparted to the homestead over which they stand guard. They are a real part of a home—the cheapest part, and so almost universally neglected. A tree requires no repairs; neither paint nor plumbing can improve it. No insurance is needed—no wages demanded for its services. It feeds, clothes and houses itself.

Trees are beautiful as well as useful too. Winter or summer their infinite variety commands our reverence, and their smile is one of peace. A tree is never in any hurry, though its upward growth defies the most powerful Natural law.

### ACER—Maple

**A. ginnala** (Amur Maple). A popular dwarf maple, with small, pretty foliage which appears early in the spring and turns bright red in autumn. It has fragrant yellow flowers and branching low is fine for grouping. Perfectly hardy and successful anywhere.

**A. negundo** (Boxelder, Ash-leaved Maple). A medium-sized tree, very rapid growing, having light colored foliage with smooth, greenish bark. Of spreading habit and uniform shape. Thrives in spite of pavements, smoke, drought and neglect.

**A. palmatum** (Japanese Maple). A dense, dwarf, shrubby tree with light green foliage of small, star-shaped leaves which assume a bronzy purple tint in the fall.

**A. platanoides** (Norway Maple). Said to be the tallest of the Maple family. A native of Europe, grows rapidly in the poorest soil, and thrives everywhere except on wet ground. Holds its foliage until November. The safest maple to plant, successfully resisting abuse, transplanting, neglect and winds.

**A. platanoides schwedleri** (Schwedler Maple). A beautiful horticultural variety with very large, bronze red leaves, and young shoots of the same color. A vigorous grower and a most effective ornamental tree. Attains about 50 feet.

**A. saccharum** (Rock Maple, Sugar Maple). The famous Sugar Maple of our Northern latitudes. An unsurpassable shade and specimen tree. Its thick-spread, dark green leaves emphasize a shape uniform and beautiful. Foliage most gorgeous in its fall coloring. Maple sugar is obtained from the adult tree, as well as valuable timber.

**A. saccharinum** (White Maple, Silver Maple, Soft Maple). A most rapid growing maple. Its leaves are deeply cut, bright green above but silvery beneath. A large tree and adapts itself well to almost any condition. The smooth, grey bark and glowing March flowers contrast beautifully. The wood is soft, and too brittle to resist ice storms well.

**A. saccharinum wieri** (Wier Maple). A horticultural variety of the silver-leaved maple, and one of the most beautiful, with deeply cut-leaved foliage. A rapid grower, shoots slender and drooping, withstanding winds and storms very well. 50 feet.

### BETULA—Birch

**B. alba laciniata** (Cutleaf Weeping Birch). Probably the best ornamental birch. A most graceful weeping tree, tall with slender branches, white bark and deeply cut, characteristic foliage. Especially desirable for specimen planting, giving a fountain effect even in winter.

**B. populifolia** (Grey Birch). A slender tree with smooth grey bark. Glossy leaves. Rapid grower.

**B. papyrifera** (Canoe Birch). An erect and stately tree, with stiff branches and bark of a chalky, silvery white. Under favorable conditions, a large tree with big leaves. Fine for open shade or specimens.

**CATALPA** *Bungei* (Manchurian Catalpa, Umbrella Tree). Suitable for formal and sentinel setting. Grafted upon a stem five to six feet high, the head forms a dense globe of heart-shaped leaves. Reliably hardy and thrives in almost any soil.

**C. speciosa** (Western Catalpa). A variety said to have originated in the West. It is very hardy and a rapid grower and is being extensively planted. Has broad, deep green leaves and beautiful, large blossoms, making it a highly ornamental tree for lawn or street uses. Sometimes attains 40 feet.

**FRAXINUS lanceolata** (Green Ash). Attractive street tree growing 60 feet tall. Rich foliage. Broad head. Seldom attacked by insects.

**FAGUS americana** (American Beech). Tall, with grey bark and handsome foliage. Edible nuts similar to Chestnuts.

**F. sylvatica riversi** (Purple Beech). Very decorative tree with dark purple foliage.



Acer saccharinum  
(Silverleaf Maple)

Acer saccharum  
(Sugar Maple)

Acer platanoides  
(Norway Maple)



Quercus palustris (Pin Oak)

**JUGLANS nigra** (Black Walnut). A very large, native, hardy tree. Rather slow growing, producing valuable timber. Large leaved, picturesque foliage which turns yellow in autumn. Valuable as a nut bearer.

**J. regia** (Persian or English Walnut). Hardy trees bearing a profusion of nuts that are considered the most choice of this family.

**J. Sieboldiana** (Japanese Walnut). Large spreading tree with large leaves. Producing nuts in clusters. Nuts are longer and rougher than Persian.

**LIRIODENDRON tulipifera** (Tulip Tree). A large tree with a broad, rather pyramidal form. Has a clean, perfectly straight trunk with dark, smooth bark, regularly serrated. Leaves large and of unusual shape, being chopped off at the tip. Immense, tulip-shaped blossoms, greenish-yellow, marked with orange, appear in May or June. A hardy native. Suitable for street or lawn.

**MORUS alba pendula** (Weeping Mulberry). Undoubtedly the most graceful weeping tree. Its beautiful foliage and long, pendulous branches make it very fine for specimen setting. Height 6 to 10 feet.

**PLATANUS orientalis** (European Planetree). The European equivalent of our native buttonball or sycamore. Will withstand hard city conditions. Used chiefly as street trees.

**POPULUS canadensis** (Carolina Poplar). A horticultural cottonwood, pyramidal in form and vigorous in growth. Leaves large, glossy, pale to deep green. Valuable for street planting on account of its exceedingly rapid growth. 40 to 50 feet.

**P. nigra italicica** (Lombardy Poplar). Another well-known old horticultural variety of very characteristic narrow, upright growth, with light green, small leaves. Grows rapidly, often reaching over 50 feet. Not entirely hardy.

#### QUERCUS—Oak

**Q. alba** (White Oak). One of the largest and best of our native trees. In common with the other oaks, of rather slow growth at first, but if given good soil and room develops into splendid specimens, having spreading heads. Leaves are smooth, of a bright green, turning to purplish color in autumn. 50 or more feet.

**Q. palustris** (Pin Oak, Water Oak). Tall, with spreading branches on graceful lines. One of the best rapid growing oaks. Quite pyramidal in shape. Glossy, dark green, deeply-cut leaves, becoming orange to scarlet in the fall. Entirely hardy, preferring damp places. A popular street tree, long lived and subject to no diseases or insect pests.

**Q. rubra** (Common Red Oak). A magnificent, native tree, rapid growing, forming a tall, round head. Foliage long, graceful and shiny, turning to a bronzy hue in autumn. An excellent specimen and all-round tree. Acorns very large.

**SALIX babylonica** (Willow) (Babylon Weeping Willow). The best of the weeping willows, always popular. Delicate foliage, borne on exceedingly graceful, slender branches. Rapid growing and quite hardy.

**S. niobe** (Golden Weeping Willow). Grows like the Babylon Weeping Willow but has yellow branches.

**S. pentandra** (Laurel Willow). A small, rapid growing tree with shining dark green foliage. Fine for specimen or tall hedge, especially at seashore or in other exposed places, as it thrives anywhere.

**SORBUS americana** (American Mountain Ash, Dogberry). A small stocky tree with dark green, unusual and very distinctive foliage. Rather inconspicuous white blossoms in late spring, followed by large clusters of showy, bright red berries, remaining on the tree all summer. Once it is established, considered a great prize among native trees. Height, 30 feet.

**TILIA** (Linden).

**T. americana** (American Linden, Basswood). A large, round-topped native tree of rapid growth. Foliage large and heart-shaped, producing dense shade. Very fine and popular for avenue planting. Its mid-June, showy flowers furnish one of the finest honey-pastures for bees, and the soft, very white timber is prized for manufacturing uses.

**T. vulgaris** (Large-leaved European Linden). Magnificent shade trees for street or home grounds, often growing to 120 feet. Resistant to diseases and insects.

**ULMUS Americana** (American Elm). The commonest of elms and the stateliest—unsurpassed in size and majesty. Fits any place where shade and large trees are useful. Even as a small tree it is beautiful. For a perfect specimen the elm must stand alone, uncrowded and unrobbed of moisture, sun or air.



Salix babylonica (Weeping Willow)

## ULMUS—Continued

**U. americana molini** (Moline Elm). Smaller than American but very desirable under certain conditions for this reason. Unlike American it has a central leader and conical head.

**U. pumila** (Chinese or Siberian Elm). A smallish tree but of very rapid growth. Does well in hot, dry locations. Good for street plantings.

## FLOWERING TREES

**CERCIS Canadensis** (American Redbud). A shrub-like tree with large, irregular head and perfect heart-shaped leaves. Derives its name Redbud from the profusion of delicate reddish pink blossoms with which it is covered in early spring before the foliage appears. One of the finest ornamental trees. Extreme height, 15 feet.

## CORNUS (Dogwood).

**C. florida** (Flowering Dogwood). One of the best flowering trees. Small (15 to 20 feet) but picturesque in its spreading, umbrel habit. Especially beautiful in spring when covered with mammoth white blossoms, yet equally so in fall when both foliage and berries are bright red.

**C. florida rubra** (Red-flowering Dogwood). This is very similar to *Cornus florida*, the only difference being that the flowers are bright red.

## CRATAEGUS (Flowering Thorn).

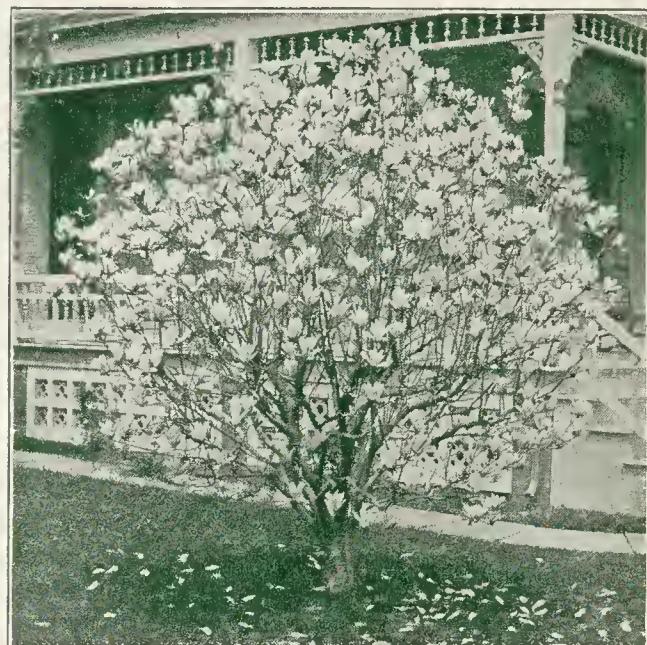
**C. oxyacantha pauli** (Paul's Double Scarlet Hawthorn). Pronounced the best of all. A small, spreading tree with flaming carmine red double flowers. Entirely hardy, thriving well in dry, unfavorable situations. Makes a very fine lawn tree or specimen planting.

**C. oxyacantha alboplena**. Same as above except double white flowers.

**MAGNOLIA Soulangeana** (Saucer Magnolia). A very popular, hardy Chinese variety of vigorous growth, forming many branches. White flowers, tinted with violet or rose, appear in abundance even when the tree is quite small, contrasting strikingly with its glossy foliage.

## MALUS (Flowering Crab).

**M. Bechtel Crab**. A very hardy, shapely tree with spreading branches. Leaves dark green, turning yellow in autumn. Double pink flowers, greatly resembling roses, and quite fragrant. Becoming more popular.



Magnolia Soulangeana (Saucer Magnolia)

**M. floribunda** (Japanese Flowering Crab). One of the best small trees, of profuse flowering habit. Bright pink buds followed by almost white flowers smother the tree before leaves form. Red fruit about the size of a pea. Entirely hardy.

**M. niedzwetzkyana** (Red-veined Crab). Leaves, stem, bark, buds are all of a reddish tint. Appearance improves with age.

## PRUNUS (Flowering Cherry, Etc.).

**P. serrulata** (Japanese Flowering Cherry). Flowers old rose, double, full. Grows to 20 feet.

**P. subhirtella** (Weeping Japanese Cherry). Bright pink flowers.

**P. persica** (Flowering Peach). Double pink, white or red flowers appear before the leaves in the spring.

**P. cerasifera pissardi** (Purpleleaf Plum). Very popular tree with handsome dark purple foliage after pink flowers in spring.

**P. cistena** (Purpleleaf Sand Cherry). Foliage purple; somewhat more bushy than the above.

**P. triloba** (Flowering Plum). Resembles the flowering Almond. Delicate pink flowers in early spring followed by green foliage. Very popular.



Ulmus Americana (American Elm)

## SPECIAL LISTS OF TREES

## STREET AND AVENUE TREES

Sugar Maple	White Oak
Norway Maple	Pin Oak
European Planetree	European Linden
American Elm	

## TREES THAT TOLERATE HARD CITY CONDITIONS

Ash Leaf Maple	European Planetree
Western Catalpa	Weeping Willow

## TREES DENSE ENOUGH FOR WINDBREAKS, SCREENS AND HEDGES

## Deciduous

Norway Maple	American Beech
Lombardy Poplar	Chinese Elm

## Evergreen

Norway Spruce	Japanese Yew
Douglas Fir	Austrian Pine
Hemlock	Scotch Pine
	American Arborvitae



## ORNAMENTAL SHRUBS

FOR softening the sharp angles or stiff lines of foundation walls or boundaries, screening of objectionable views, mass planting for effect or bringing out features of landscape beauty, shrubs cannot be dispensed with in lawn ornamentation. Proper selection as to height and judicious choosing of varieties will insure the accomplishment of any of these objects and provide a succession of bloom from spring until fall.

The deciduous shrubs include many interesting plants with foliage of various shades, and flowers of every color. When planted as specimens and allowed to develop in symmetry and natural grace, shrubs become objects of beauty.

**AMELANCHIER canadensis** (Downy Shadblow). An erect bushy tree. Snowy white flowers in early spring. Does best in a naturalistic location.

### BERBERIS—Barberry

**B. thunbergi** (Japanese Barberry). This is probably the commonest and hardiest of hedge plants. It is a dwarf, compact shrub with many small leaves which change to colors, orange red to bronze in the autumn. In addition to this coloring the bright scarlet berries are present, and remain through the winter. Height, 4-5 feet.

**B. thunbergi atropurpurea** (Redleaved Barberry). Same as above with scarlet foliage in spring, dull red in summer, and brilliant again in fall. Likes full sunlight. Height, 3-6 feet.

**B. thunbergi minor** (Box Barberry). A substitute for Boxwood. Can be kept a few inches high by shearing.

### BUDDLEIA—Butterfly Bush

**B. davidi magnifica**. Attractive soft purple lavender racemes. Big showy shrubs. Very fragrant. Height, 5-6 feet.

**B. farquhari**. An improved Butterfly Bush of darker purple than above. Height, 5-7 feet.

**CALYCANTHUS floridus** (Sweet Shrub). Small old-fashioned shrub, the chocolate colored blossoms of which are very sweet scented and spicy, resembling the odor of strawberries. The flowers are double, growing from the base of the leaves, which are rough and a handsome green above. Height, 4-6 feet.

### CORNUS—Dogwood

**C. elegantissima**. Small shrub with blood red branches. Inconspicuous white flowers. Fruit, a whitish berry. Leaves edged with white. 4-6 feet.

**C. stolonifera** (Red-osier Dogwood). This spreading shrub is a little smaller than most of the Dogwoods. It also has dark red branchlets and pretty white flowers, but its fruit is white. 10 feet.

**C. stolonifera lutea** (Yellow Dogwood). Smaller than above with bright yellow twigs in winter. Very decorative. Height, 8-10 feet.

**COTONEATSER acutifolia**. Good hedge plant. Glossy black fruits. Grows 8-10 feet.

**C. divaricata**. Small pink flowers in summer. Scarlet fruits in autumn. Grows to 6 feet.

**CYDONIA Japonica** (Flowering Quince). A small spreading shrub with spiny branches. In spring it produces many clusters of bright scarlet flowers. Its foliage is a dark, glossy green. It bears yellow fruits, resembling pears. Height, 5-6 feet.

### DEUTZIA

**D. gracilis** (Slender Deutzia). A small shrub with slender branches and foliage of soft green. In June it is a solid mass of white racemes. An excellent border plant, being so small. 3 feet.

**D. lemoinei**. A spreading dwarf shrub with bright green foliage and upright, graceful branches, bearing in early summer large clusters of showy, white flowers. Height, 5-6 feet.

## DEUTZIA—Continued

**D. Pride of Rochester.** A vigorous grower producing large, double white flowers profusely tinged with rose. One of the earliest to bloom. Height, 10-12 feet.

**EUONYMUS Alatus** (Winged Spindlewood). A curious irregular shrub with large leaves turning red in autumn. Branches have corky wings. Fine in mass plantings. Height, 10 feet.

**EXOCHORDA grandiflora** (Pearl Bush). Grows to 9 or 10 feet. Glistening white flowers in large clusters.

## FORSYTHIA—Goldenbell

**F. intermedia** (Hybrid Forsythia). A big fountain-like shrub covered with bright yellow flowers in early April. Height, 6 feet.

**F. suspensa** (Weeping Forsythia). Resembles the Fortunei in its flowers, but the growth is somewhat drooping. Height, 6-8 feet.

**F. ovata** (Korean Forsythia). A perfectly hardy shrub with pale primrose blossoms ten days before the other Forsythias. Gracefully arched branches with greyish yellow bark.

**F. suspensa fortunei** (Fortune Forsythia). A medium-sized, beautiful shrub, with bright yellow flowers that appear before the leaves. Foliage, a deep green. Best of early flowering shrubs. Height, 6-8 feet.

**HAMAMELIS vernalis** (Vernal Witch-hazel). A low growing shrub, 6 feet at the most with fragrant yellow flowers throughout the winter months.

**HIBISCUS Syriacus** (Althea or Rose-of-Sharon). Large showy flowers in August. Tall growing shrub. We offer white, red, pink.

**KERRIA japonica**. A slender, green-branched shrub, with glove-shaped yellow flowers from July to October. Very ornamental. 4 to 5 feet high.

## HYDRANGEA

**H. arborescens grandiflora** (Snowhill Hydrangea). Resembles the Paniculata in general form and shape of flowers which are borne in panicles of pyramidal shape from 5 to 8 inches in diameter and 8 to 10 inches long, and change to a greenish white. One of the best.



Philadelphus lemoinei, Virginal

Viburnum americanum  
(American Cranberry-bush)

**H. paniculata grandiflora** (Peegee Hydrangea). A beautiful shrub that continues to be the favorite Hydrangea. Leaves of bright, shining green. Light pink flowers, changing to brown later in the fall, are borne in huge panicles, 8 to 12 inches long in August and September. Successfully grown in tree form. A desirable lawn ornament. Height about 7 feet.

**H. paniculata grandiflora** (Panicle Hydrangea) (Tree form). Grown on stems from three to five feet high. A very attractive and desirable form of this beautiful shrub.

**KOLKWITZIA Amabilis** (Beauty Bush). A recent introduction of the late E. H. Wilson. Bright shell pink flowers on long sweeping branches. Very hardy. 4-6 feet high.

**LIGUSTRUM** (Privet).

**L. amurense** (Amur Privet). Glossy green foliage holds its color almost the entire year. Very hardy. Valuable for hedges or borders as it stands shearing to any extent. Extreme height, 10 feet.

**L. ibolium** Privet. Upright, hardy form. Recommended instead of the rather tender California Privet.

**LONICERA** (Honeysuckle).

**L. morrowi** (Morrow Honeysuckle). A native of Japan. A strong, upright grower, producing pure white flowers profusely in May and June. Its bright red berries are very attractive during autumn. Hardy and easily grown. Height, 6 feet.

**L. tatarica** (Honeysuckle). The flowers make a lovely contrast with the foliage. Height, 6 to 8 feet. White, pink, red.

**PRUNUS glandulosa** (Flowering Almond). Grows 5 to 6 feet high. Covered with tiny white or pink flowers in early spring. Unsurpassed in beauty in its season.

## PHILADELPHUS—Mockorange

**P. coronarius** (Sweet Mockorange). A well-known shrub with pure white, very fragrant flowers. One of the first to bloom. Adult height about 8 feet.

**P. coronarius aureus** (Golden Mockorange). A graceful dwarf variety with bright yellow foliage throughout the season.

**P. lemoinei, Mont Blanc.** Dwarf sort with very large fragrant flowers produced in abundance.

**P. lemoinei, Virginal.** A tall handsome shrub with large semi-double white flowers. Called by many the finest of the Philadelphus.

**RHODOTYPOS Kerrioides** (Jetbead). Single white flowers and shiny black berries throughout winter. Medium height suitable for borders. Height, 4-5 feet.

**RHUS cotinus** (Common Smoke Tree) (Purple Finge). Clouds of purplish misty flowers in early June. Tall growing.

**SAMBUCUS canadensis** (American Elder). A large shrub with ornamental foliage. White flowers borne in large panicles in June and followed by reddish purple berries in fall. 8-10 feet high.

**S. canadensis aurea** (Golden American Elder). A handsome variety with golden yellow foliage. Height, 8 to 10 feet.

### SPIRAEA

**S. Anthony Waterer Spirea**. A fine dwarf Spirea with dark crimson flowers. Height, 2 to 3 feet.

**S. billardi**. Tall growing shrub with pink flowers in long spikes from July until September. 5 to 6 feet high.

**S. prunifolia** (Bridalwreath). Foliage of dark, shining green, changing to autumn tints in the fall. Double, pure white flowers are borne in summer, the entire length of the twigs. Height, 6 feet.

**S. thunbergi** (Thunberg Spirea). Of dwarf habit. Narrow, long foliage turns to orange scarlet in the fall. Pure white flowers are borne the entire length of the twigs. Height, 4 feet.

**S. Vanhouttei**. Undoubtedly the most popular of all varieties, having rich green foliage which changes to beautiful tints in the fall. In blooming season the bush is a perfect mass of pure white flowers. Height, 6 feet.

**SYMPHORICARPOS racemosus** (Snowberry). Grows 4 to 5 feet high with pink flowers in June followed in autumn with large white berries which hang on nearly all winter.

**S. vulgaris** (Indian Currant). Similar to above with pink berries in the fall. Fine for shady places.

### SYRINGA—Lilac

**S. persica**. Very fragrant light purple flowers in large, loose clusters. Called the Persian lilac. 8 feet.

**S. villosa** (Late Lilac). Pale pinkish flowers in late June. 12 feet.

**S. vulgaris** (Common Lilac). Rich purple blooms of delightful fragrance.

**S. vulgaris alba** (Common White Lilac). Taller than purple but very graceful and fragrant.

**S. Hybrid Lilacs**. Very hardy and easily grown. We offer the following choice varieties. Height, 10 feet.

Chas. Jolly. Double, purplish red.

Ludwig Spaeth. Single, dark purple.

Marie LeGreye. Single, white.

M. Buchner. Double, pale lilac.

Belle de Nancy. Double, rose pink.

Chas. X. Single, reddish purple.

Pres. Grevy. Double violet blue.

Mme. Lemoine. Double, white.

**TAMARIX Africana**. Very graceful shrub, feathery foliage. Long slender racemes of pink flowers in early summer. Height, 12-15 feet.

### VIBURNUM

**V. carlesi** (Fragrant Viburnum). Waxy pink flowers of delicate fragrance in early spring. Very hardy. 4 to 5 feet high.

**V. americanum** (American Cranberry-bush). A most handsome decorative and ornamental red-berried shrub for Northern planting. White flowers. Height, 8 to 12 feet.

**V. opulus sterile** (Common Snowball). The old-fashioned Snowball. Its profuse, globular clusters of pure white flowers are produced in May and June, and make a very attractive appearance. Height, 10 to 12 feet.

**V. tomentosum plicatum**. A symmetrical, handsome bush, with brown branches and beautifully ribbed foliage, green above and bronze purple beneath. Pure white flowers on large, flat cymes. Height, 6 feet.

### WEIGELA

**W. candida Eva Rathke**. Flowers brilliant crimson. A beautiful, clear, distinctive shade. Height, 4 to 5 feet.

**W. rosea** (Pink Weigela). An elegant variety with fine rose colored flowers appearing in June. Height, 6 to 7 feet.

**W. rosea nana variegata** (Dwarf Weigela). Low growing with variegated foliage. 4 feet high.



Hibiscus (Althea)

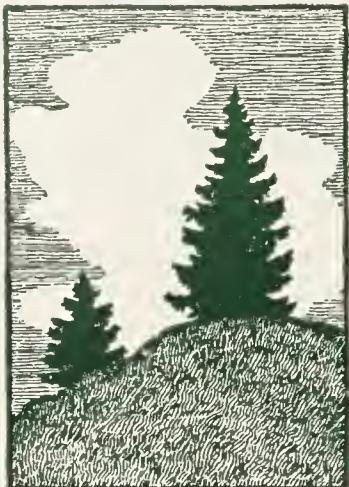


Snowberry



Buddelia (Butterfly Bush)

# PLANNING AND PLANTING



Twenty years ago the general practice in planting the small property was to place specimen plants hodge-podge in the most conspicuous places on the grounds with little thought of final appearance and utility of the planting as a whole.

Today we are concerned with the best use that can be made with trees and plants, through **proper planning**, to attain both utility and beauty. Front lawns, entrances, foundations, borders, service areas, private areas (the Outdoor Living Room) in the rear, flower gardens, fruit and vegetable gardens, all must be tied into a complete and unified picture by intelligent planning **at the start**.

Many houses particularly in cities, towns and suburban districts are placed on small lots, and here, even more than on larger places, is careful planning needed to produce the effect of spaciousness. In fact, when a new house is to be built, results would usually be much more satisfactory if a reliable landscape authority were consulted about the placing of house and garage on the property for the best ultimate use of space and most attractive appearance when building and planting are completed.

We have men experienced in making out comprehensive plans for the small or large property and we offer a long list of plant materials necessary in this landscape work. Also, at a small additional charge, we do the actual work of planting the trees, shrubs, etc.

If you already have a plan and wish us to quote on the list of plants needed, we will gladly do so. If you do not have a plan and wish to consult with us, your request will bring an early visit by our representative.



Simple, effective planting like this is within the means of every home owner.



## HARDY VINES AND GROUND COVERS

VINES provide the finishing touch of any planting. Some adhere to masonry, some must be trained through lattice or trellis, and others, with their tendrils, will cling anywhere tenaciously, unshaken by wind or weather. Visualize the effect desired and train them accordingly, to cover your walls and pilasters, your lattice or trellis, the pergola or laundry posts, the porch or portico, veranda or fence.

**AMPELOPSIS quinquefolia** (Virginia Creeper). One of the finest vines for covering walks, verandas or trunks of trees. Foliage green, turning to rich crimson in autumn. A rapid grower and quickly fastens to anything.

**A. tricuspidata** (Vetchi) (Boston Ivy). Very valuable for covering brick or stone structures, rockeries or walls. Leaves smaller than the American. Forms a dense sheet of green as leaves overlap each other. Foliage changes to crimson scarlet in the fall. A little difficult to start, but when established requires no further care.

**ARISTOLOCHIA sipho** (Dutchmans-pipe). Pipe-shaped, yellowish brown flowers. A native species of climbing habit and rapid growth. Foliage, light green.

**CAMPsis radicans** (Trumpetcreeper). Large trumpet-shaped scarlet flowers in August. A hardy climbing plant.

**CELASTRUS scandens** (American Bittersweet). A native climber with fine large leaves, yellow flowers and clusters of capsuled orange fruit. A rapid grower.

**CLEMATIS paniculata**. In September the flowers appear in a perfect mass of white. The fragrance is most delicious and penetrating. Vine is a rapid grower. Foliage, glossy green.

**C. jackmani** (Jackman Clematis). Perhaps the best known Clematis. Immense flowers of an intense violet purple, bloom continuously all summer.

**C. henryi**. Free bloomer producing large white flowers constantly during the entire summer.

**C. Madame Edouard Andre**. Much like Clematis Jackmani. Flowers a beautiful shade of crimson. A free bloomer.

**EUONYMUS radicans** (Wintercreeper). Useful for covering old walls, etc., as it is self-clinging. A very hardy, dense-growing, trailing vine. Leaves, dull green with whitish veins. Grows rapidly.

**LONICERA** (Hall's Japanese Honeysuckle). Pure white flowers, changing to yellow. Foliage remains green well into winter. Very fragrant and covered with flowers almost the entire season. One of the best bloomers, and a strong, vigorous vine.

**PACHYSANDRA terminalis** (Japanese Spurge). The perfect ground cover, especially useful in dense shade where nothing else will grow. Low growth, glossy evergreen leaves, small white flowers and waxy white berries.

**WISTERIA sinensis** (Chinese Wisteria). Flowers of pale blue are borne in long, pendulous clusters in May and June. Rapid growing and elegant, attaining 15 to 20 feet in a season. One of the best of the Wisterias.

**VINCA minor** (Hardy Myrtle). Evergreen ground cover for dry sunny or shady positions. Periwinkle blue flowers in profusion in the spring and occasionally during summer and fall.



Campsis radicans (Trumpetcreeper)

## ROSES

THE Rose has been aptly termed the "Queen of Flowers." Among all the flowering shrubs, there is nothing that can compare with the rose. The great variety of color, shape and size of flowers, the diversity and character of the foliage and ravishing perfumes give it a wider range for decoration than any other single group of plants. When we add to these qualifications ease of culture, quick and ample response in blossoms, it is not to be wondered at. In nearly all collections of flowering and ornamental shrubs it occupies a first place.



Frau Karl Druschki

### HYBRID PERPETUAL ROSES

This class of roses is very hardy and bloom in June and again in the autumn.

**AMERICAN BEAUTY.** This cherry red rose is a favorite the world over. Very vigorous grower.

**FRAU KARL DRUSCHKI** (White American Beauty, Snow Queen). Really an ever-blooming variety, bearing a heavy crop of blossoms in June and from then, every month, until frost. The long pointed, egg-shaped buds open loosely into blossoms of pure white. Perfectly hardy and prolific both North and South.

**GENERAL JACQUEMINOT.** The favorite old "Jack" Rose, known and loved everywhere. Blossoms of a rich, velvety crimson with large petals. Blooms freely and grows well anywhere. Hardy.

**HARRISON'S YELLOW.** Small, semi-double, golden yellow flowers in such profusion it is a mass of color. One of the few absolutely hardy yellow roses. Blossoms in spring only.

**MRS. JOHN LAING.** Blossoms of a soft, clear pink are large and delightfully fragrant. Blooms profusely from June until Autumn.

**PAUL NEYRON** (Peony Rose). The largest rose of all. Blossoms of clear pink shading to rose. Flowers are well shaped, double and very fragrant. Plant is erect in habit and a strong, heavy grower, blooming repeatedly during the season.

**PRINCE CAMILLE DE ROHAN.** One of the darkest red roses—almost black. Buds are well formed and the open, fragrant flowers double enough to make it one of the most attractive "blacks." Sometimes referred to as "Black Beauty."

**ULRICH BRUNNER** (Hardy American Beauty). A bright cherry red rose of striking beauty. The flowers are unusually large. Hardy and vigorous in growth, resisting mildew. Almost continuously in bloom from early summer until autumn.

### HYBRID TEA ROSES

These roses bloom intermittently all summer and have a wide range of colors.

**BETTY UPRICHARD.** Carmine buds suffused with orange and copper. An unusual color and a good strong grower.

**BRIARCLIFF.** Deep rose pink petals with the outer ones a silvery pink. Large fragrant long lasting flowers.

**COLUMBIA.** An American rose growing as perfectly in the garden as the hot-house. Color, a bright pink which deepens but does not fade as the flowers age. The plant is strong and sturdy, with luxuriant foliage, and blooms continuously until late in fall.

**DUCHESS OF WELLINGTON.** The old standby with exquisite buds of rich saffron-yellow tinged with orange. Flowers open semi-double turning to soft creamy yellow as they age.

**EDEL.** A strong growing rose of ivory white. Very full and stands dry weather exceptionally well.

**EDITH NELLIE PERKINS.** Petals soft salmon pink on inside and deep coppery rose on outside. All flushed with orange and red. Vigorous plants, profuse blooms.

**ETOILE de HOLLAND.** An outstanding red rose of deep crimson that does not discolor. Growth neat and vigorous.

**FRANCIS SCOTT KEY.** An immense flower of bright crimson. Very good in the fall.



Etoile de Holland

**GRUSS AN TEPLITZ.** The choicest of bright, vivid scarlet roses, shading to crimson. Flowers open loosely. Beautiful foliage, the younger growth being a bronzy plum color. Very fragrant. Hardy and strong, and blooms continuously until November.

**HADLEY.** One of the best known Crimson roses with beautiful buds and rich velvety scarlet flowers.

**JONKHEER J. L. MOCK.** The vivid crimson buds of this striking rose open to enormous blooms with silvery pink petals, flushed a deep pink on the outside. An outstanding variety.

**KILLARNEY PINK.** A sprightly pink and brightest in hot weather. Bud especially well shaped. A dependable bloomer.

**KILLARNEY WHITE.** Snowy white blooms with large petals. Very beautiful in the bud.

**LA FRANCE.** Probably the best known and loved of any rose. Flowers and buds of large size, a beautiful silvery pink peach blossom, changing to deep rose. The most fragrant of any rose. Must be severely pruned.

**LOS ANGELES.** Petals are a bright pink shading to rich yellow at base. Form of flower is perfect, not opening too promptly. Growth is very strong.

**MADAME BUTTERFLY.** Buds and flowers equally beautiful, color being shadings of shrimp pink, apricot and gold. Strong and vigorous, blooming constantly.

**MME. EDOUARD HERRIOT.** Brilliant and sparkling coral, red and orange. Free flowering, medium strong growth.

**MRS. AARON WARD.** One of the few hardy yellow monthly roses. Small, dainty flowers of Indian yellow, edge of petals being tinged with creamy yellow and pink. Foliage, bronze green.

**MRS. ERSKINE P. THOM.** Considered to be the best yellow garden rose of recent introduction. Strong formed flowers of rich lemon-yellow. Most attractive in all stages.

**MRS. HENRY MORSE.** Inside of petals in silvery pink flushed with yellow; outside a deep rosy pink. Low growing and neatly erect in branching. Continuous bloom.

**OPHELIA.** An old favorite unexcelled for cutting. Creamy white petals with occasional pink stains and tinges of golden yellow. Excellent growth, free flowering and fragrant.

**RADIANCE.** A beautiful blending of bright carmine with shades of opal and copper. Blooms have long stems and are very lasting as cut flowers.

**RED RADIANCE.** Similar in every respect to Radiance, of which it is a sport, differing only in color, which is a rich red that does not fade with age.



Radiance

**REV. F. PAGE-ROBERTS.** Long pointed buds of Indian yellow washed with deep carmine. Sweet and spicy fragrance. A remarkably fine rose.

**SOUV. DE CLAUDIO PERNET.** Striking sunflower yellow. Very large and full with beautifully formed buds. The most widely planted yellow.

#### NEW HYBRID TEAS

New varieties of proven worth that should be in every rose lover's garden.

**AUTUMN.** Rightfully named as these blossoms of burnt orange stained and splashed with red orange and pink. No two exactly alike.

**COUNTESS VANDAL** (Patented). Long tapering buds open into flowers which are an indescribable blending of copper, salmon and gold. Fragrant, free blooming on long stems.

**DAME EDITH HELEN.** Very large clear pink blooms. A choice exhibition rose.

**E. G. HILL.** Large blooms of strong deep velvety red. The outstanding red rose for every garden.

**JOANNA HILL.** Yellow buds open to a gracefully flaring flower of creamy white tinged salmon and ochre at the base. Vigorous growth.

**LADY MARGARET STEWART.** Well shaped brilliant orange-yellow turning to gold, sometimes streaked with burnt-orange and red.

**NIGRETTE.** The new "black rose" that is such a rich, deep velvety maroon that at a distance it seems black. Fragrant and very free blooming.

**PRESIDENT HOOVER.** A new rose of red and yellow in the bud opening to delicate shades of yellow, copper and pink. An outstanding new variety.

**TALISMAN.** A red and yellow rose, recently developed. Widely planted and familiar to all.

**TOKEN** (Patented). Lovely pointed buds and open flowers of rich orange apricot. Free flowering and vigorous.

#### CLIMBING ROSES AND RAMBLERS

**AMERICAN PILLAR.** A true climbing rose. Very large. Glossy green foliage, with enormous trusses of flowers—wild rose pink, with clear white eye—of striking size and beauty.

**CHAPLIN'S PINK CLIMBER.** A lusty grower producing single to semi-double flowers of brilliant pink.

**CLIMBING AMERICAN BEAUTY.** A magnificent climber, but not a true "rambler," although with individual flowers fully as large, of a brighter crimson, and fragrant. Blooms abundantly and will succeed in almost any situation.



Mme. Butterfly



Paul's Scarlet Climber

**CRIMSON RAMBLER.** Clusters of bright crimson flowers. An old-fashioned rose of great hardiness and long blooming season.

**DOROTHY PERKINS.** Larger than the Crimson Rambler, double, a clear shell pink, slightly fragrant, with crinkled edges, giving a fluffy effect. These striking flowers are borne in immense clusters of 10 to 30 sometimes, and last for a long time. One of the best and hardiest of Ramblers.

**DR. W. VAN FLEET.** A beautiful flesh pink, with individual blooms four inches in diameter. Much like Hybrid Teas in form and color, with a pleasing fragrance. A long-stemmed, valuable cutting rose. This is the best pink climber. Absolutely hardy, making canes of twelve or fifteen feet in a favorable season.

**MME. GREGOIRE STAECHELIN.** Stiff, erect, with huge fragrant pink clusters of blossoms stained crimson in the bud. Broad frilled petals.

**PAUL'S SCARLET CLIMBER.** A rose of brilliant, vivid scarlet maintained without burning or bleaching until the petals fall. Semi-double flowers of medium size completely cover the vine. A most important addition to climbing roses.

**SILVER MOON.** Distinct from all others. Long, pale yellow, scented buds open into semi-double white flowers five inches in diameter, revealing bright golden stamens. Canes vigorous, with disease resistant foliage. Classed with the three best climbers.

**TAUSEENDSCHON** (Thousand Beauties). Entirely different. In a single cluster of blooms, there will be all shades from light pink to a rosy carmine, some almost white with a suggestion of yellow. Every cluster a bouquet of harmonious colors.

**WHITE DOROTHY.** Similar to Pink Dorothy Perkins, but with pure white double flowers. Valuable because of the rarity of good white climbing roses.

**PRIMROSE.** Abundant shiny foliage. Clear, primrose yellow rosette-shaped flowers borne several in a cluster. Reasonably hardy.

**BLAZE.** A new patented rose of a more brilliant red than Paul's Scarlet Climber but of similar characteristics except for its wonderful everblooming quality. A climber that is in bloom all summer.

#### BABY RAMBLERS

**WHITE BABY RAMBLER.** Pure white flowers, in large clusters, showing yellow stamens, each branch carrying from 15 to 20 of them.

**BABY DOROTHY.** A dwarf that has shell pink blossoms like Dorothy Perkins. Showiest and prettiest of the pink "Baby" roses.

**CRIMSON BABY RAMBLER.** The original and best dwarf Baby Rambler. Crimson flowers in clusters. It is an ideal pot rose, and one of the best bedding or hedging roses in existence. It blooms outdoors from May to November, and indoors the year round. Very hardy.

**ELLEN POULSEN.** Brilliant rose pink flowers. Ideal for borders or along driveways. Very hardy and vigorous.

#### RUGOSA ROSES

**AGNES.** A new yellow Rugosa of great value as a large bush or pillar rose. Blooms in early June.

**F. T. GROOTENDORST.** Small, bright red flowers. Fringed and double. Blooms continuously spring, summer and fall.

**PINK GROOTENDORST.** Similar to above with clear, light, shell pink flowers.

## ROSE CULTURE

Roses thrive best in clay loam well enriched with rotted manure. They should have an open, airy situation unshaded by trees or buildings. Work up the soil thoroughly to a depth of 12 to 15 inches, and besides this, apply occasionally some good organic plant food of which there are several good brands on the market. These plant foods should be used in strict accordance with the directions supplied with them.

Always plant in solid beds and each class by itself. Hardy roses may be planted in the fall or spring, but we recommend spring planting. Dormant plants set in the spring should be planted early, before growth is started. No plant suffers more by being late planted than does the rose. Raised mostly for their flowers, it is necessary to give roses that culture best adapted to produce this result. A very rich soil is of first importance.

All roses should be clipped back closely at planting, and each spring remove at least two-thirds of the previous year's growth. In the ever-blooming class remove even more. Strong growing varieties require less pruning back than weak ones.

As soon as severe freezing weather sets in, raise the earth around the plant 3 or 4 inches, and then cover with leaves, straw or evergreen boughs. It is very important to keep the plants vigorous and free from diseases and insects. See spraying directions on page 30.

## HARDY PERENNIALS

PERENNIALS should be found in every garden. They are far superior as cut flowers to annuals, once planted requiring very little attention. A succession can be chosen that will furnish a constant supply of cut flowers from frost to frost. We are always glad to assist our customers in making selections for various purposes.

By **Hardy Herbaceous Perennials** is meant such plants as remain permanently in the ground. Their foliage dies down each autumn, but comes again with the same vigor the following spring. There is such a variety in color and time of blooming among them that continuous flowering can be assured from early spring to late fall. To facilitate selections the time of flowering is indicated, also the approximate height of the plant.



Phlox, Mrs. Jenkins

- \***ACHILLEA ptarmica** fl. pl. (Milfoil or Yarrow). Pure white double flowers all summer. 18 inches.
- ACONITUM fischeri** (Monkshood). 2 to 3 feet. Dark blue flowers September and October.
- \***ALYSSUM saxatile compactum** (Basket of Gold). 1 foot. Bright yellow flowers in early spring.
- ALTHEA rosea** (Hollyhock). Assorted colors, single and double.
- ANCHUSA, Dropmore** (Alkanet). 4 to 5 feet. Blue flowers on spikes all summer.
- ANEMONE** (Windflower). 18 inches.
- \***ANTHEMIS tinctoria** (Marguerite). Golden yellow flowers all summer. 18 inches.
- \***AQUILEGIA, Hybrid.** Long-spurred flowers of gorgeous colors. 2 feet.
- \***ARABIS alpina** (Rockcress). Pure white flowers in dense masses. 6 inches.
- ASTILBE, hybrida** (Perennial Spirea). 5 to 6 feet. Mixed colors. Erect, feathery, colorful flower trusses.
- AUBRETIA deltoides** (Rainbow Rockcress). Creeping plants. 1 foot. Bright purple flowers in April and July.

\* indicates plants suitable for rockery.

### CAMPANULA (Bellflower).

- C. medium** (Single Canterbury Bells). Mixed colors. 3 feet.
- \***C. carpatica** (Harebell). Clear blue. 8 inches. Blooms all summer.

### \*CERASTIUM tomentosum (Snow-in-summer). White flowers. Low growing.

### CHRYSANTHEMUM (Daisy).

- \***C. maximum** (Shasta Daisy). 2 feet.
- \***C. coccinum** (Pyrethrum) (Painted Daisy).

### **C. hybrida** (Hardy Garden Chrysanthemum). 2 feet.

### COREOPSIS grandiflora (Golden Wave). Bright yellow flowers. All summer. 2 feet.

### DELPHINIUM Hybrids (Larkspur). New giants of soft pastel shades. 4-5 feet.

### \*DIANTHUS (Pinks).

- \***D. barbatus** (Sweet William). Great masses of rich colored blooms. 15 inches.
- \***D. caryophyllus** (Hardy Carnation). 18 inches. Mixed colors.
- \***D. deltoides** (Maiden Pink). Crimson. Fine for rockeries. 8 inches.
- \***D. plumarius** (Grass Pink). Pink, purplish and white on tall spikes. 15 inches.

### DICTAMNUS fraxinella (Gas Plant). Pink flowers. Waxy leaves which give off a pungent odor. 2 feet.

### DIELYTRA spectabilis (Bleeding Heart). Heart-shaped rose colored flowers in April and May.

### DIGITALIS purpurea (Foxglove). Mixed colors. 5 to 6 feet.

### \*GAILLARDIA aristata (Blanketflower). Brilliant red and yellow flowers from June to November. 2 feet.

### \*GEUM boresi (Avens). Red flowers all summer. 18 inches.

### GYPSOPHILA paniculata (Babysbreath). Mass of delicate white blooms. \***Repens**. Creeping form for rockeries.

### HIBISCUS moscheutos (Common Rose Mallow). Enormous size. Mixed colors. July to September. 4-5 feet.

### \*HOSTA undulata variegata (Plantain Lily). Variegated foliage, blue flowers. July and August. 1 foot.

### \*IBERIS sempervirens (Hardy Candytuft). Dwarf white flowers in early spring. 8 inches.

### IRIS.

#### \***I. kaempferi** (Japanese Iris). Shades of blue.

#### **I. germanica** (German Iris).

Dalmatica. Blue.

Liebellungen. Purplish violet.

Monsignor. Violet.

Sir Robert Peel. Light blue.

Tendresse. Porcelain yellow.



Peony, Edulis Superba

**KNIPHOFIA hybridus** (*Tritoma*) (Red Hot Poker or Torch Lily). Showy flowers ranging from orange to red.

**LATHYRUS latifolius** (Perennial Sweet Pea). Mixed colors. 12 to 15 inches.

**LILIUM** (Lily).

*L. auratum* (Goldbanded Lily). White with gold and brown bands.

*L. candidum* (Madonna Lily). The famous white old-fashioned lily.

*L. elegans*. Dwarf. Mixed colors.

*L. longiflorum* (Easter Lily).

*L. speciosum magnificum* (Japanese or Orchid Lily). Deep rich red.

*L. regale*. White, pink and gold marking.

*L. tigrinum florepleno* (Double Tiger Lily). Orange.

\***LINUM perenne** (Flax). Blue flowers. 15 inches.

**LUPINUS polyphyllus** (Lupine). Mixed colors. June to September. 3 feet.

**LYCHNIS chalcedonica** (Maltese Cross). Vivid scarlet flowers. 3 feet. Summer and early fall.

**MONARDA didyma** (Bee Balm). Red flowers in July and August. 3 feet.

\***MYOSOTIS palustris** (Forget-me-not). Blue flowers with yellow eye in early spring. 8 inches.

\***NEPETA mussini** (Ground Ivy). Creeping plant with lavender blooms. 18 inches.

**OENOTHERA glauca fraseri** (Evening Primrose). Pale yellow. Blooms all summer. One foot.

**PAPAVER** (Poppy).

*P. nudicaule* (Iceland Poppy). About a foot high. Mixed colors. All summer.

*P. orientale* (Oriental Poppy). Bright crimson—scarlet bloom of great size. 3 feet high.

**PAEONIA** (Peony). We offer the following choice named varieties:

Adolphe Rousseau. Dark red.

Asa Gray. Shell pink.

Comte de Nippon. White, crimson spots.

Duke of Wellington. White.

Edulis Superba. Old rose—extra early.

Felix Crousse. Brilliant red.

Festiva Max. White, crimson trips.

Prince Imperial. Brilliant purplish scarlet.

Fragrans. Solferino red.

Golden Harvest. Center yellow—tips pink.

Karl Rosenfield. Deep crimson.

Livingston. Late. Rose pink.

Louis VanHoutte. Dark.

Mme. de Verneville. White with pink center.

Sarah Bernhardt.

Officinalis rubra. Bright red. Early.

Pres. Roosevelt. Deep rich brilliant red.

Semi-rose type.

Richardson Dorchester. Pink.

Single, White.

Single, Pink.

**PHLOX paniculata** (Phlox). Very showy in the border in late summer and fall. We have the following named varieties:

Beacon. Cherry red.

Cyrano. Large, dark pink.

Enchantress. Bright salmon pink.

Firebrand. Orange, scarlet.

LaVague. Mauve, carmine eye.

Michael Buchner. Dark purple.

Mrs. Jenkins. Pure white.

Pantheon. Scarlet pink. Dark red eye.

Prof. Schliemann. Lilac rose.

Purity. White.

Rheinlander. Salmon pink.

Richard Wallace. White with red eye.

Rijnstroom. Rose, pink.

R. P. Struthers. Carmine, claret red eye.

Sunset. Dark rose pink.

Sunshine. Pink.

Thor. Deep salmon-pink with red eye.

VonHochburg. Brilliant red.

Assorted colors: Pink, purple, white, red unnamed.

\* indicates plants suitable for rockery.

## PERENNIAL PLANTING HINTS

Do not plant too thickly. A rule which may be followed, is to set plants which grow to a height of 2 feet or less, 12 inches apart, and all taller one-half their height. *Aquilegias* and *Coreopsis* which grow 2 feet high, for example, may be planted 12 inches apart, while *Delphinium formosum* and *Japanese Iris*, which grow 3 feet high, should usually be 18 inches apart.

Cultivation is of the simplest, with any good garden soil, deeply enriched. The best time to plant is **early** in the fall or when they are just starting into growth in the spring. The soil should be comparatively dry when plants are set. Cultivation should be frequent and weeds kept down. During hot, dry weather, or when it is not convenient to water, a mulch of any loose, light material is very beneficial. For this purpose grass clippings are excellent.

About mid-November, when all soft growth has been killed and the tops are thoroughly ripened, the old stems should be removed and burned. Then apply a winter protection of leaves or litter. Perennials should be given a liberal dressing of well-rotted manure each spring.

\***PHLOX subulata** (Moss or ground pink). 4 inches.

**PHYSALIS alkekengi** (Chinese Lantern Plant). Orange, scarlet. Lantern-like fruits. Will last all winter when cut.

\***PRIMULA polyanthus** (Cluster Primrose). Mixed colors. Flowers in the spring. 1 foot.

\***SAPONARIA ocymoides** (Soapwort). Border plant. Pink flowers. May. 2 feet.

\***SEDUM** (Stonecrop).

**S. acre** (Golden Moss). Yellow. July.

**S. spectabile**. Brilliant red. August.

\***VERONICA incana** (Speedwell). Blue flowers in July and August. 1 foot.

**YUCCA filamentosa** (Adam's Needle). Six foot spikes of white flowers.

\* indicates plants suitable for rockery.

### BULBS—SPRING FLOWERING

**CROCUS**. Should be planted in the fall. Cheerful little flowers of white, blue and yellow in March and April.

#### NARCISSUS—Daffodils

One of the most popular of spring flowering bulbs. Flowers yellow or white. Bloom in April. Plant in fall.

**HYACINTHS**. Showy flowers for indoor or outdoor culture. Plant in fall. If planted indoors will bloom around Christmas time. Assorted colors.

**TULIPS**. Plant in the fall. We can supply all types; Darwins, single early, double early. Cottage and Breeders. Put up in choice mixtures.

### SUMMER FLOWERING BULBS

**CANNAS**. Plant in spring. Should be used in a bed or in a shrubbery border. The brilliant colors make an effective picture all summer long.

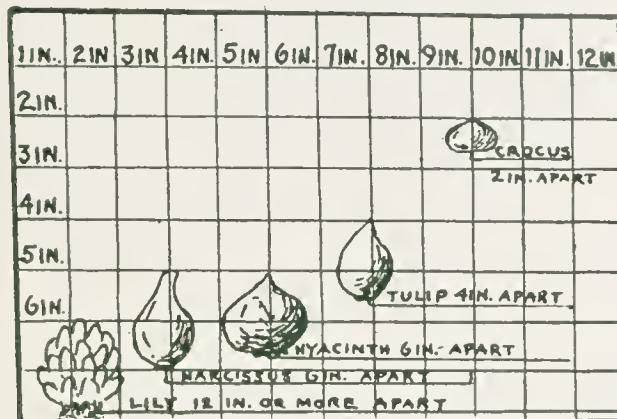
**DAHLIAS**. Rapidly attaining prominence among flower lovers. Assorted colors. Plant in spring.

**GLADIOLUS**. A favorite cut flower. Great variety of

colors and long blooming period make these flowers most valuable. Assorted colors. Plant in spring.

### PLANTING BULBS

In light or sandy soil plant as diagram shows. A good supply of well-rotted manure worked into the soil previous to planting will assist in producing large, beautiful blooms.



## FRUIT

A FRUIT tree is not only beautiful of itself, but highest utility multiplies its value and even adds to its beauty. What more delightful to the eye than a globose shaped, deep green cherry tree, or a pyramidal pear tree on a lawn, all on fire with its load of iridescent fruit! Never a more perfect shade than the "back-door" apple tree of our grandmothers.

As a windbreak, a massed orchard is perfect, giving air drainage while protecting the estate or farmstead from the shock of storms without the rock-like resistance of evergreens, which produce back-drafts and eddies.

A background of small fruits, mounting from currants to raspberries, and then to a corner-thicket of blackberries beyond, is something more than just a screen. It invites your friends and your bird-friends too. A pergola bowered in purpling grapes is doubly attractive, combining beauty and bounty. Did you ever see a homestead with too much fruit—or grow any quinces or gooseberries or peaches you couldn't give away? No other feature of the newly-built dwelling—be it in town or country—gives it such attractiveness and saleability as a copious supply of fruits. To reduce sentiment to shillings, fifty dollars invested in well-assorted fruit trees and plants will add ten times the cost to a sale or rental value—besides that in the meantime the proprietor is himself regaled most sumptuously.

## APPLES

**BALDWIN**. Too well-known to need description—still the most popular apple this side of the Atlantic and steadily gaining in favor in London markets. The standard strain of this fruit is of a deep, uniform red. Oblate spheroid in shape, with flesh of a light canary yellow. One of the few apples whose blossoms are reliably self-fertile so that it may be planted in a solid block, although this is not recommended.

**BANANA**. Very large size; color deep yellow splashed with red. Vigorous grower, heavy bearer. Flesh tender and aromatic.

**CHAMPLAIN**. A new cross between Northern Spy and McIntosh that is the size of the latter and fully as red. Fruit ripens as late as Spy and has the same

high quality. Originated in the Spaulding Orchard, Clinton County, New York.

**CHENANGO STRAWBERRY**. Tree a moderate grower and good bearer. Fruit tender, mild flavor. Attractive color, tender flesh. Good for home orchard.

**CORTLAND**. Bright red, blushed with very dark red, splashed and striped with carmine. The flesh is a pinkish tint, and while fine, crisp, exceedingly tender and juicy, it is protected by a skin more tough than that of the McIntosh. The tree is a vigorous, up-spreading, hardy grower, healthy and very productive, holding its ripening fruit better than the McIntosh, and maturing about three weeks later.



Delicious

**DELICIOUS.** A comparatively new variety that everywhere has proved itself to be one of the finest all-purpose fruits. It varies slightly in shape and coloring in different sections and on different soils. Fruit large, spread with brilliant, dark red. Fine grained, crisp, melting and juicy with a delightful aroma. The very highest quality for every purpose, being a splendid early winter shipper, yet keeping perfectly. The tree is vigorous and has so far proved perfectly hardy.

**DUCHESS OF OLDENBURG.** Fruit large, greenish yellow with red stripes. Flesh light yellow, fairly fine grained and firm, with a pleasant acid flavor. A cooking favorite and prime market sort. A good shipper for an early apple and commands good prices. We offer the red strain.

**HYSLOP CRAB.** Large, deep crimson, with beautiful bloom. Very prolific and popular. A very showy fruit, making excellent jelly. Midautumn to January. Tree hardy, vigorous and productive.

**FALL PIPPIN.** Large, beautiful light yellow when fully ripe. An old favorite. Flesh tender, rich, and of good dessert quality. Tree hardy, vigorous and long-lived. Season, September to October.

**FAMEUSE (Snow).** An old and well-known variety. Fruit medium in size. Color, pale greenish yellow mixed with stripes of red, with splashes of same on shady side. Flesh white, tender and juicy, slightly perfumed. Flavor, sub-acid, extra good. Tree a moderate grower, productive. Very hardy. Valuable variety for Northern sections. Season, October to December.

**RHODE ISLAND GREENING.** Fruit large and smooth, dark green overspread with yellow. Flesh tender, rich, rather acid, but highly flavored and excellent. Tree vigorous and spreading. A heavy, constant bearer, and reliably self-fertile. Season, December to March.

**GRAVENSTEIN.** Large, greenish yellow to orange yellow, with stripes of light and dark red. Very good to best. Season, late September to early November.

**HUBBARDSTON.** Good commercial variety. Green mottled with red. October.

**JONATHAN.** At its best this apple is one of the most desirable varieties for the fancy, holiday trade. Medium size of very excellent quality, of a beautiful, brilliant red. Tree perfectly hardy but inclined to be

biennial in bearing, and being a moderate grower and bedaring young is recommended as a "filler," and to be given high culture.

**KENDALL.** By far the most attractive of the McIntosh seedlings. The apples are large, trim, handsomely colored over the entire surface with dark red covered with a rich bloom. They possess the whitish fine-grained flesh of McIntosh but have a more sprightly flavor. Fruits hang better than McIntosh.

**KING.** Worthy of its name in every sense, except as to hardiness of tree stock. Glutted markets have no effect on selected King apples. Ready November to March. Red on a yellow background. Showy, of largest size, and of high quality. It is truly fruit "fit for a king."

**McINTOSH RED.** Large, red all over. Good keeper. Tree very hardy and vigorous. Middle of October. Bears young.

**McINTOSH EARLY.** Of most beautiful appearance, extra high quality, deep wine-red color, and for a September apple, large size and long keeping. Its only faults are a too tender skin and a tendency to part from the stem the very day it has colored.

**MACOUN (Late McIntosh).** A new variety of McIntosh which harvests even later than the McIntosh. Probably will be an important commercial variety.

**NORTHERN SPY.** An excellent and leading commercial variety in the colder states. Fruit large and attractive, bright red-striped overspread with a delicate bloom. Very tender, crisp and so juicy it is not good for evaporating. Season, November to March. Late in coming into bearing.

**RED NORTHERN SPY.** New type of Northern Spy. Solid red. Very desirable for market. December.

**OPALESCENT.** A handsome new apple. Tender and juicy. Hardy, healthy and productive. December to March.

**ORLEANS** is of the Delicious type, but the fruits are more attractive in appearance and run larger. While Orleans comes in season about with Delicious, it keeps in common storage 6 weeks longer. The fruit has the same rich delicious taste that characterizes Delicious—another "improved Delicious."

**POUND SWEET.** Sometimes called Pumpkin Sweet. Greenish yellow apple of large size. October to January.

**RED ASTRACHAN.** Fruit above medium, greenish yellow, almost covered with striped crimson. Flesh white, crisp, juicy, brisk acid; good. Tree upright, spreading, vigorous growth. An early and abundant bearer. Season, July.

**ROME BEAUTY.** Large, roundish, very slightly conical, mostly covered with bright red on pale yellow ground. Flesh tender, not fine grained, juicy and of good quality. Ripens early in winter.

**ROME BEAUTY, RED.** Large sized handsomely colored apple. Especially adapted to Southeastern New York and New Jersey. November.

**GOLDEN RUSSET.** A delicious dessert apple from March till July. Color, dull green under a heavy brown russet with bronze red blush. Flesh greenish yellow, of good to very good quality, being sprightly, subacid and tender, though rather dry. Tree perfectly hardy, fine grower and bearer, but distinctively self-sterile, requiring to be inter-planted.

**SPITZENBURG.** Large, bright, purplish red shaded with yellow. Flesh firm. Juicy and spicy; of fine quality. Thrives in Northern localities.

**RED STARK.** A good, red apple for commerce, especially in the warmer latitudes. Fruit large. Flesh coarse, inclined to be dry but mild. Tree a thrifty grower and a universally heavy cropper.

**STAYMAN WINESAP.** One of the finest apples for fancy trade. Of uniformly handsome appearance. Fruit when well colored a deep, almost purplish red. Flesh yellow, firm and crisp, of a distinctive, mildly subacid flavor and inclined to be dry. Tree a favorite in the Middle West and South, but will grow and do well almost anywhere. A reliable annual bearer, beginning young. December to May.

**SWEET BOUGH.** Large to very large. Flesh a yellowish white, exceedingly tender, with an excellent sweet flavor. Ripens from the middle to the end of summer. A moderate and regular bearer.

**TOLMAN'S SWEET.** Probably the best sweet, winter apple. A splendid baker and fair dessert fruit of its mid-winter class. Medium size, a beautiful even yellow, sometimes tinged with red. Flavor rich and very sweet. Tree perfectly hardy and a prolific bearer.

**TWENTY OUNCE.** In the East still the standard, late fall apple by virtue of its many excellent characteristics. The fruit is extra large, rich yellow, background striped and splashed with red. Unsurpassed for all cooking purposes. The tree thrives on a great variety of soils and exposures.

**WASHINGTON CO. STRAWBERRY.** A good variety for home use. Large sized fruits of good color. Hardy. September and October.

**WAGENER.** Used a great deal as a "Filler." A large, light red apple of good quality that is always readily saleable. Tree hardy, a good grower when young and bears very early.

**WEALTHY.** Well named, for it has so far proved, perhaps, the most profitable fall apple. Bears young and heavily. A high quality, striped red and yellow dessert apple. Tree very hardy and thrifty grower.



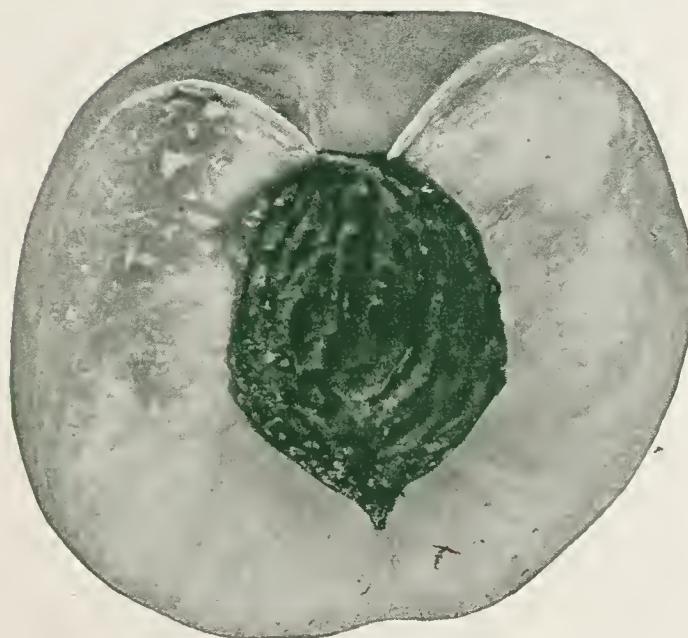
McIntosh

**WOLF RIVER.** This is the mammoth red and greenish yellow apple that always attracts so much attention at fairs. Bears young and heavily. Perfectly hardy in any latitude.

**YELLOW TRANSPARENT.** One of the most valuable early apples. Fruit medium, smooth translucent skin, becoming pale yellow when fully ripe. Flesh tender, fine grained and of splendid quality. Tree is moderately vigorous and an early annual bearer. Season, July.

**DWARF APPLES.** Very productive and early bearing; usually second year after planting. Adapted to yards and small gardens. We offer the following varieties: Baldwin, Delicious and McIntosh.

## PEACHES



Hale

**BELLE OF GEORGIA.** The best early September market peach. A standard commercial variety, planted by nearly all growers, ripening with Old Nixon which it has largely superseded. Fruit very large, white with red cheek, very freestone, and white flesh. Fair quality.

**EARLY CRAWFORD.** Long held its position as the favorite yellow freestone. Fruit high flavored, rich and abundantly juicy. Very large, golden yellow, blushed with dark red. Flesh marbled yellow with red at pit. Trees healthy and vigorous, but a relatively spare bearer. Season, late August to early September.

**LATE CRAWFORD.** Follows the early variety by about two weeks and similar to it in every way, though of even finer quality. Not as hardy in bud as its prototype.

**CARMAN.** One of the hardiest, most reliable market peaches. Large, rich, juicy, and of fair quality. Yellow white, with deep blush. Skin very tough, making a good shipper and free from rot.

**CHAMPION.** The earliest iron-clad peach. Remarkable for its size and a freestone of high quality. White with red cheek. Season, late August. Unexcelled for canning.

## PEACHES—Continued

**EARLY ELBERTA.** Very large, high quality. Flesh is fine grained, sweet. Midseason.

**ELBERTA.** The peer of all commercial peaches. Mid-season, extra large, light yellow, with red cheek, a perfect freestone. Tree vigorous and prolific, succeeding universally wherever peaches can be grown.

**LATE ELBERTA.** Similar to Elberta but ripens considerably later than its namesake.

**GOLDEN JUBILEE.** A second generation seedling of Elberta and Greensboro, is a large early peach. Resembles Elberta in shape, but it is better in quality and ripens 3 weeks earlier. Skin yellow, blushed with red; flesh yellow, juicy, medium firm, tender; sweet or slightly subacid; freestone.

**GREENSBORO.** The most popular July peach. A white-fleshed, clingstone. Fruit large and showy, rather poor quality, but shipping and standing up well. Skin greenish white, blushed and striped with dark red. Tree enormously productive and early bearing.

**J. H. HALE.** Bridges the gap between Rochester and Elberta. One of the largest peaches. Superior to Elberta in size, firmness and shipping quality. Yellow and red coloring. Highly attractive but unfortunately not as prolific as a commercial fruit should be. Prob-

ably somewhat self-sterile. Flesh fine grained and quality good.

**MIKADO.** A popular early variety. Medium in size and vigor and very productive in mixed plantings. The fruit is of good quality; ripens the first week of August, is medium in size, round in shape, semi-cling, and is attractive yellow blushed with red. Mikado is pollen-sterile and so requires cross-pollination.

**ROCHESTER.** A peach of the Crawford type. Fruit of large size, with thick skin, orange yellow, blushed with dark red. Flesh yellow, very juicy, first rate quality and freestone. Tree a vigorous grower, bearing very young. Season, mid-August.

**SOUTH HAVEN.** A recent introduction. Immense size. Comes into market just before Elberta. Beautiful color and freestone. Very hardy and highly recommended.

**STEVENS RARERIPE.** White and red, white fleshed freestone peach. Hardy and of extra good quality. Late.

**SALWAY.** A regular bearer. Flesh deep yellow, juicy. Free. Early October.

See that the trees you plant are healthy, have good roots and are free from disease and insects.

Give them a good start.

## PEARS

**ANJOU.** A large, fine pear, with buttery, melting flesh, having a sprightly flavor. Tree a fine grower and very productive. One of the best. Season, October to January.

**BARTLETT.** Large. Yellow, with a beautiful blush. Flesh buttery, very juicy and with a rich, musky flavor. The tree is a vigorous and erect grower, excellent for garden or commercial orchard planting. Bears early and abundantly. Will begin to bear in three years, and in about seven years sometimes produces a bushel of fruit per tree. A leader among canning pears. August and September.

**BEURRE BOSC.** Large, dull brownish yellow. Flesh, half melting, highly flavored, sweet and delicious. Tree a moderate grower, rather erect, and bears well. Season, September to November.

**CLAPP FAVORITE.** A large, fine pear, resembling the Bartlett, but without its musky flavor. Pale lemon yellow with brown dots, and fine texture. Flesh melting, buttery, and juicy, with a delicate flavor. Decays quickly when ripe. Tree hardy and productive. Season, August and September.

**DUCHESSE D'ANGOULEME.** Very large, greenish yellow, russetted. Flesh melting and sweet. A beautiful tree and heavy bearer. Does its best as a dwarf. Season, October and November.

**FLEMISH BEAUTY.** Fruit large, somewhat varying in shape. Flesh juicy, melting, sweet and excellent flavor. Extra hardy. September to October.

**KIEFFER.** The most popular market pear grown. Fruit of good size, rich color and fair quality, canned. Should be picked at maturity and ripened indoors. Tree a rapid grower anywhere, tremendously vigorous and seldom blights. Season, October to November.

**LAWRENCE.** Medium yellow with brown dots. Melting, pleasant, aromatic. November-December.

**SECKEL.** Small, but universally popular. Rich, yellowish, brown. One of the best and highest flavored pears known. Very productive. September and October.

**SHELDON.** Large. Dull yellow to greenish russet with red cheek. Flesh a little coarse, melting and very juicy. Tree vigorous, productive. October.

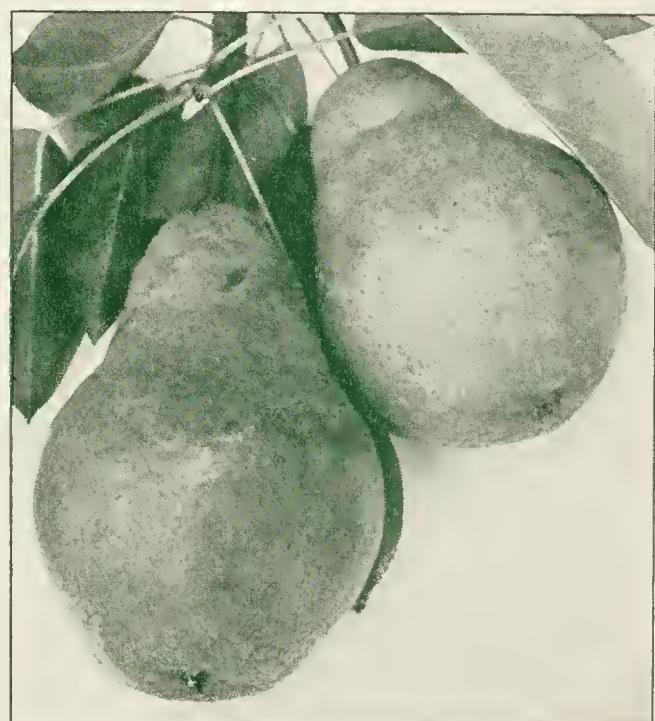
**TYSON.** Summer pear. August. Melting and juicy.

**WORDEN SECKEL.** Much larger than Seckel. Good keeper. Very sweet, juicy. October.

**WINTER NELIS.** Enormously productive. Very hardy. Late November and December.

**WILDER EARLY.** Small to medium. Fine grained, tender. Vigorous grower. Early August.

**DWARF PEARS.** Fruit is the same as standard trees. They come into bearing young and are very productive. Can be set close together. We offer the following varieties: Anjou, Bartlett, Duchess and Seckel.



Bartlett

## PLUMS

**ABUNDANCE.** One of the most successful commercial varieties. Skin pinkish red to dark red, overspread with a light bloom. Flesh yellow, sweet, melting, tender and very juicy. Tree a vigorous grower, reliably hardy and prodigiously productive on a wide variety of soils. One of the earliest.

**BURBANK.** One of the largest of the Japanese varieties. Of uniform, attractive red color mottled over a yellow ground and covered with a thick bloom. Flesh a deep lemon yellow of excellent quality, yet firm and a good shipper for so large a fruit. Tree a vigorous grower and very productive—in fact, inclined to overbear. One of the few plums reliably self-fertile. Season, late August to September.

**BRADSHAW.** The most generally planted European in the East. A very large, fine, early plum. Dark, violet red. Tree a slow grower, but hardy, vigorous, productive, self-fertile. Season, mid-August.

**DAMSON.** A well-known English dessert variety. The purplish black fruit is sprinkled with numerous distinctive dots, and is small and nearly round. One of the best for preserving. Season, early October.

**GERMAN PRUNE.** Probably the oldest plum grown and well-known in every civilized country. Skin a purple black with beautiful bloom. Flesh amber green, firm, sweet and mild. Tree fairly hardy and vigorous, holding its fruit well. Inclined to overbear. Season, late.

**GRAND DUKE.** A large sized, prune-shaped plum. Purple color, flesh firm, good shipper. Late.

**HALL** is a cross between Golden Drop and Grand Duke, two of the largest and handsomest European plums, but both below the mark in quality. Hall is better in flesh and flavor characters. The fruits are so handsome and well flavored that they will sell in any market. The tree is nearly perfect. This is one of the best of the Station's new plums.

**ITALIAN PRUNE.** A great favorite on account of its delicious, juicy quality and being readily freestone. Skin purplish black with heavy bloom. Flesh greenish yellow. Firm, and keeps and ships well. Tree is strong grower and not quite hardy, though a tremendous bearer. Season, late.

**IMPERIAL EPINEUSE.** A California plum. Purple, thin skin, golden flesh, juicy, sweet, tender. A variety that is bound to be very popular. Very vigorous.

**IMPERIAL GAGE.** Large, greenish, juicy and rich. Very productive. August.

**YELLOW EGG.** Golden yellow with a thick accentuating bloom. The largest and best of the yellow plums. Flesh yellow, a little coarse but excellent for cooking. Tree a free grower, very productive and hardy, ripening its fruit all at once in late August.

**LOMBARD.** One of the most popular, succeeding almost everywhere. Fruit purplish red with thick, pink bloom making it exceedingly attractive. Yellow fleshed, juicy and sweet. Tree a medium-sized, upright grower, very hardy and productive. Inclined to overbear as the flower is self-fertile. Season, early September.

**MIDDLEBURG.** Originated in Schoharie County. Very late. Purple of fine quality. Good shipper.

**MONARCH.** Dark purple. Good dessert plum. Late. Widely grown in New York State.

**POND'S SEEDLING.** Extremely large, good shipper. Red fruit of medium quality. Late.

**REINE CLAUDE.** Fruit round, greenish yellow. Slightly mottled with red, with a light bloom and a distinctive aroma. Tree very vigorous, remarkably productive and self-fertile. Season, late September.



Stanley

**RED JUNE.** Probably the earliest good plum. Skin a uniform garnet overlaid with bloom. A good shipper and of fair quality. Tree grows large, of somewhat sprawling habit, but very hard, healthy and productive. Season, mid-August.

**SATSUMA.** The latest of the Japanese. Identified by its very small pit and deep red flesh. This fruit is of the highest quality for both dessert and canning. Tree a moderate grower, but hardy and productive.

**STANLEY.** A cross between Agen and Grand Duke. The tree is healthy, vigorous, and produces full crops annually in midseason. The fruit is large, prune shape, dark blue with thick bloom; flesh greenish yellow, juicy, fine-grained, tender, firm, sweet, pleasant; excellent raw or cooked. Stone free.

**WICKSON.** Very large. Crimson. Heavy crops. Good market variety. Early August.

**YAKIMA.** Very large bright red fruit. Prune type. Very hardy; good shipper. One of the outstanding new varieties.

**YELLOW GAGE.** Large oval, golden yellow. Rich, sugary.

## APRICOTS

**CLARK.** Large, yellow with red cheeks. Flesh of good quality. Juicy and rich flavor.

**HARRIS.** The largest and hardest apricot. Prolific and profitable. Season about July 20th.

**MOORPARK.** Fruit is large, orange yellow, with red cheek, sweet and rich. One of the best freestones. The best of the Europeans. Season, later than the others.

## NECTARINES

The Nectarine has size and a smooth skin like the plum. In other ways it is more like a peach. It is of rich, delicious flavor, juicy and melting, and highly prized as a dessert fruit. It is much superior to the peach, as a dryer and makes excellent preserves. The Nectarine is as hardy as the peach and requires the same culture.

Varieties: **Boston** and **Red Roman**.

## QUINCES

**CHAMPION.** A large, greenish yellow fruit, without hard spots or core. Of delicate flavor, imparting an exquisite taste and odor to any other fruit with which it is prepared. Tree a symmetrical grower, bearing while young. Season late.

**ORANGE.** The most popular and extensively cultivated old variety. Fruit large, round, bright golden yellow, cooking tender, and of excellent quality. Tree hardy and a very reliable grower and bearer.

**REA.** A seedling of the Orange and nearly double its size, equally as good and ripens a week earlier.

## CHERRIES

**BLACK TARTARIAN.** More largely planted than any other sweet cherry. Dark red, almost purple. Medium size. Quality very good. Tree vigorous and productive. Season, the last of June into July.

**CHASE.** A late black sour cherry. Hardy. Large trees of great vigor.

**DYEHOUSE.** Bright red, prolific bearer. Excellent variety for canning. Good shipper. Last of May.

**EARLY RICHMOND.** The earliest popular sour cherry. Medium size, red, quite acid. Hardy, healthy very early, very productive. Season, mid-June.

**ENGLISH MORELLO.** The standard late, sour cherry. Best of its season, but rather acid to eat as a dessert. Excellent for canning, being dark red, almost black. Tree very hardy, and dwarfish in habit. Season, August first.

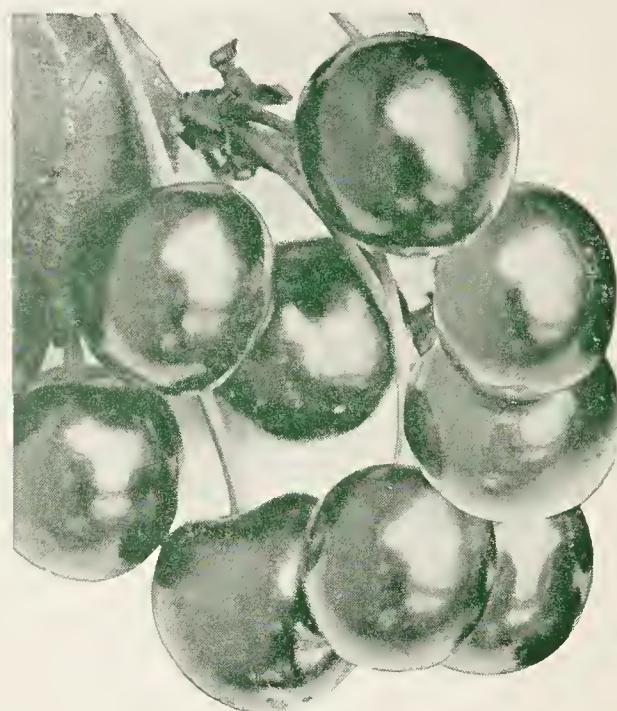
**GOVERNOR WOOD.** Size large to very large. Rich, light yellow amber, blushed with red. Of excellent quality. Season, late June.

**LAMBERT.** A very valuable sweet of the largest size, enormous bearing habit. Dark purple red with a sheen-like gloss, firm, rich, and juicy. Tree hardy and a strong grower.

**MAY DUKE.** The "Dukes" as a class are intermediate in flavor between the sweet and sour varieties of cherries, and this one is considered to be the best of them all—and the earliest. Large, dark red, rich, juicy and excellent. Tree a reliable producer. Season, June.

**MONTMORENCY.** The most popular sour cherry in America. Large, light red. Flesh tender, subacid and of best quality. Season, end of June to July. Tree hardy and enormously productive.

**NAPOLEON.** A pale yellow and bright red Bigarreau. A firm, waxy-translucent fruit of great beauty. Large size, juicy and sweet. Tree vigorous and very productive. Season, early July.



Black Tartarian

**SCHMIDT BIGARREAU.** Fruit of immense size, rich, deep black. Tree a vigorous grower and an abundant bearer.

**WINDSOR.** Deep purple. Large, firm and of high quality. The leading late, sweet cherry and claimed to be the hardiest. Tree a prolific bearer.

**YELLOW SPANISH.** An amber white fruit of great beauty, red on sunny side. Large, firm, juicy and sweet.

**SENECA.** A new black cherry similar to Tartarian in size and color but two weeks earlier. Rich sweet flavor. Tree vigorous and productive.

## GRAPES



Fredonia

**AGAWAM.** One of the most reliable Roger's Hybrids. Purplish red, of striking appearance, and large berry. Sweet and with rich aromatic flavor. Ripens soon after Concord—a good keeper. Vine self-fertile, vigorous and very productive, but subject to mildew.

**BRIGHTON.** A popular red York State commercial variety, ripening before Concord. A sure crop, high quality, handsome grape, on a wide variety of soils. Not a good keeper. Berry medium to large with heavy bloom. Must be interplanted, being self-sterile.

**CACO.** A new red grape of extremely large size. Vigorous and hardy, ripens early in September. Very high quality and highly recommended.

**CAMPBELL EARLY.** A strikingly handsome, large black August grape with blue bloom. Tough skin and good shipper, coloring up ten days before ripening, and will hang six weeks on the vine. Bunches large and compact, often double-shouldered. Must be pruned closely. Inclined to overbear. Excellent commercial sort for Northern latitudes.

**CATAWBA.** A well-known, late-ripening, chocolate-colored grape of a rich musky flavor. When well grown will keep indefinitely, but demands high culture, a warm situation and long season to mature perfectly. Bunch and berry both large to very large. Quality the very best.

**CONCORD.** Still the most popular grape in America, and grown with success in every state in the Union. It will adapt itself to almost any condition. Bunch and berry large, fair quality with rich blooms. Vine strong grower, healthy, hardy and productive, and reliably self-fertile.

**DELAWARE.** An early September red grape that has remained the standard of excellence for generations, no raisin more sweet. No fruit of any class more juicy, one that always commands the highest market prices. Vine very hardy and productive, but a slow grower, requiring rich soil, good culture, and close pruning. Foliage sometimes subject to mildew.

**FREDONIA.** Stands alone as the earliest good black grape. Vigorous, hardy and productive. Fruit ripens two weeks earlier than Worden. Clusters medium in size, cylindrical, and compact. Berries large, round and persistent; skin thick and tough; flesh juicy, solid but tender; very good quality.

**MOORE'S DIAMOND.** An early greenish white grape of fine quality, large bunch and berry. A vigorous growing, prolific vine, producing enormously.

**MOORE'S EARLY.** Large, purple black grape ripening before Concord. Sweet and of good quality. Vine very hardy.

**NIAGARA.** Undoubtedly the most popular white grape. A typical commercial fruit, enormously productive, and of fair quality, ripening with Concord. Flesh a little tender for shipping and keeping. Berries large. Vine a rampant grower.

**PORTLAND.** A new white grape developed in the Chautauqua grape region. Beautiful greenish yellow like Niagara. Very hardy and productive. Very sweet. Ripens early and can be eaten before it is fully ripe.

**SALEM.** A rich dark red early grape of excellent flavor as are all the Roger's Hybrids, ripening slightly before Concord. An excellent garden variety.

**WORDEN.** Best known offspring of the Concord. One week earlier and superior to it in quality, size of berry, and compact, handsome clusters. Tender skin, however, and inclined to crack. Must be carefully handled in packing and shipping. Vine hardy and vigorous.

## SMALL FRUITS

### CURRENTS

**CHERRY.** An old favorite. Of the largest size, but not as productive as its rivals. Plant of slow, sturdy growth, holding its fruit well up from the ground. Should be picked when first turned red. Fruit very acid and desirable for jelly-making.

**FAY'S PROLIFIC.** A most prolific and popular commercial variety. Berries of large size and fine sub-acid flavor. A bushy, healthy, vigorous grower.

**PERFECTION.** The earliest commercial currant. A relatively new variety, ten days earlier than Wilder, always catching the top of the early market by its fine appearance.

**WHITE GRAPE.** A very large, yellowish white translucent fruit of most excellent quality. Sweet or mildly acid. A heavy bearer and universal favorite.

**WILDER.** A strong, upright grower, producing an immense crop which will hold in condition perfectly for weeks. Bears very young, but being a strong-growing bush, requires severe pruning to maintain size in the fruit.

### GOOSEBERRIES

**DOWNING.** Pale green, large and handsome. The most popular market variety. Fruit covered with a white bloom that makes it very attractive. Bush a strong grower, productive and healthy. Quality excellent.

**HOUGHTON.** A distinctively American variety which never mildews. Fruit small to medium, pale red, tender, sweet and very good. Plant of spreading, rather slender habit.

**CHAUTAUQUA.** Without doubt the best and largest gooseberry that is universally successful.

### MULBERRIES

**DOWNING** (Everbearing). Fruit large, blue black, sugary, rich and juicy. Ripens from late June into August, sometimes continuing for three months. Tree unusually large, vigorous and productive.

**RUSSIAN.** The hardiest mulberry, extensively used for windbreaks and hedges, and for feeding silk worms. Tree an upright and vigorous grower. Should not be planted near houses or street.

**NEW AMERICAN.** The best all-round mulberry. Equal to the Downing in all respects and much harder. Fruit large, black, sweet and rich. Tree vigorous and very productive. Season, mid-June to mid-September.



Newburgh

### RASPBERRIES, BLACKCAPS, ETC.

**NEWBURGH.** Most promising variety in the New York Experiment Station collection. Bright attractive red fruit is large, very firm and has no superior in keeping and shipping qualities. Plants vigorous, hardy and so productive that canes are often bent to the ground with fruit. Fruit easily picked. Free from Mosaic. Several days earlier than Cuthbert. The best raspberry under cultivation.

**COLUMBIAN.** Of distinctive color and character. Enormously productive and vigorous. For canning and drying. Berries large and juicy, of a dull purple color.

**GOLDEN QUEEN.** The leader in yellow raspberries. Very distinctive and productive.

**LATHAM.** A recently introduced variety, very hardy and productive with large, round, firm berries of a rich brilliant red in late June and July.

**RASPBERRIES—Continued**

**ST. REGIS.** Originated on the sandy lands of Southern New Jersey where it is a heavy cropper. Not as successful farther North where it is a lighter cropper unless heavily fertilized. Fruit continues to form until the first snows. For a heavy fall crop, all old canes should be cut in spring.

**CUMBERLAND.** The largest and best midseason blackcap. Healthy, vigorous, productive of firm, large berries, fine in quality. One of the hardiest varieties and wonderfully productive under high culture.

**PLUM FARMER.** A remarkably popular blackcap, said to be the earliest market variety. Quality very good, large size and the entire crop maturing at once. Not always entirely hardy in the North.

**ELDORADO.** Said to be the hardiest and sweetest blackberry, withstanding the winters in the far Northwest perfectly. Berries large to very large, borne in clusters that ripen well together, exceedingly melting and sweet to the taste.

**LUCRETIA DEWBERRY.** The standard dewberry, ripening before the blackberry. Enormous in size and very sweet and tender. The best of the blackberry family—and under high culture, the most productive. Vines of slender, trailing habit, requiring a trellis for best results, succeeding on all soils. Should be mulched in winter like strawberries.

**STRAWBERRIES**

**FAIRFAX.** Very high yield, dark red, very firm, large size which holds up through a long season. Brings a high price on the market for it ships well and is of excellent quality. A fitting companion to the new Dorsett.

**DORSETT.** Another new variety producing enormous crops of bright red berries. Flavor unexcelled. Fruit borne on stalks well off the ground. Ships unusually well because fruit is so firm.

**BLAKEMORE.** Excellent shipper. Fruit is large, dark red with fine flavor. A development of the U. S. Department of Agriculture.

**PREMIER.** Extra early. Very productive. Fruit of good quality. Very prolific and considered the best early market variety by many growers.

**SENATOR DUNLAP.** A fine table and canning berry. Firm, large size, bright crimson berries with dark red flesh.

**GIBSON.** Fine shipping variety. Medium late. Very productive. A strong grower, resists drought and of fine flavor and color.

**WM. BELT.** An all season variety. Very popular on account of its extreme high quality and the fact that it does well on a variety of soils.

**MASTODON.** A new everbearing variety of exceptional size and productiveness. Large crops from June until October. Deep red color, fine flavor.

**ASPARAGUS**

**MARY WASHINGTON.** This variety is the result of careful breeding by the U. S. Department of Agriculture, Washington, D. C., with the object of eliminating rust. Produces straight shoots of dark green. Tight, firm buds that do not open out or begin to branch until far out of the ground. Very large.

**RHUBARB**

**MYATT'S LINNAEUS.** The standard market sort. Almost evergreen, and except in very hot, dry climates, grows right through the summer and is sometimes used until October.

**VICTORIA.** Very large. Beautiful color. Quality good. Valuable for market. Early.

**SUCCESSFUL PLANTING, PRUNING AND CARE**

**W**E are often blamed for what might easily have been avoided had the customer consulted the plain wants and requirements of the stock and given it at least a fair chance to grow and do well. We are interested in the success of every article we send out; we take the greatest pains to place every item in the hands of our customers in the best possible condition, and in order to furnish some precautions and provide for complete satisfaction, we give a few hints on such points as are most essential.

**CARE OF FRUIT TREES**

The bundles should be opened immediately, the roots dipped in water, then heeled in moist ground so that the mellow earth will come in contact with the roots and thoroughly protect them from the air, having the earth tramped solid about them.

When ready to plant, take up only a few at a time, puddle the roots and do not allow them to lie exposed to the sun or air.

The ground should be carefully prepared by deep plowing and firming down with a disc and harrow.

**PLANTING**

The holes for planting must be large enough to receive the roots freely, without cramping or bending them from their natural position. All broken or mutilated portions of the roots must be cut off so as to leave the ends smooth and sound. Plant deep enough so that the level of the soil will be up to or slightly above the soil marks on the tree; pack the soil very firmly about

the roots by tamping with the feet or post tamper, being careful not to bark or break the roots. Leave three inches of the surface soil loose to serve as a mulch. If the ground is very dry apply one to two pails of water before this soil mulch is in place, and after the water has soaked away it can then be placed over the moist soil.

**SUITABLE DISTANCE FOR PLANTING**

Apples—30 to 40 feet apart each way.

Standard Pears and Cherries—20 feet apart each way.

Plums, Peaches and Apricots—16 to 18 feet apart each way.

Dwarf Pears and Quinces—10 to 12 feet apart each way.

Grapes—rows of 10 to 16 feet apart; 7 to 10 feet in rows.

Currants and Gooseberries—4 feet apart.

Raspberries and Blackberries—3 to 4 by 5 to 7 feet.

Strawberries, for field culture—1 by 3 to 3½ feet.

Strawberries, for garden culture—1 to 2 feet apart.

## NUMBER OF TREES OR PLANTS TO ACRE

40 feet apart each way . . . . .	28
30 feet apart each way . . . . .	48
20 feet apart each way . . . . .	110
18 feet apart each way . . . . .	135
15 feet apart each way . . . . .	205
12 feet apart each way . . . . .	300
10 feet apart each way . . . . .	435
8 feet apart each way . . . . .	680
6 feet apart each way . . . . .	1210
5 feet apart each way . . . . .	1745
3 feet apart each way . . . . .	2725
3 feet apart each way . . . . .	4840

**RULE**—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant, which, divided into the number of square feet in an acre (43,500), will give the number of plants or trees to the acre.

## SETTING OUT AN ORCHARD

The two most common systems of planting are "rectangular" and "hexagonal." In the former the trees are set at the four corners of a rectangle, usually in the form of a square. This is the simplest and most common method as it is easy to lay out and gives equally wide spaces between the trees for cultivating or cropping. In the hexagonal or triangular system the trees are set in the form of a hexagon with one tree in the middle making a series of equilateral triangles.

There will be fewer insects, less disease and greater ease in caring for the orchard when the trees are set proper distances. In setting the home orchard it often is convenient to set the apple trees 40 feet apart and use the smaller growing peach, cherry, etc., as fillers inasmuch as the filler trees will likely have done their best before the apple trees become large enough to need all the space.

In case peaches or other filler trees are used the distances between the trees and the number of trees per acre will vary. Apple trees, to do their best, should be at least 30 feet apart; if they are long lived 40 feet will be none too far. Pears required from 20 to 25 feet for best results. Peaches, plums, apricots and sour cherries need about 20 feet. Sweet cherries grow larger and there should be 30 feet between the trees. Don't crowd the trees, give them plenty of room.

Before starting to dig the holes, a decision should be made as to what plan of planting is best suited for the location selected and the rows should be measured off and stakes set to show where the trees are to be planted. Line up the stakes in all directions and dig each hole with the stake location as the center.

## FERTILIZING

Young orchards, planted on prepared land, should need little if any fertilizing for the first few years. If necessary an application of barnyard manure under the branches will allow the rain-drip from the foliage to carry nourishment downward to the spreading roots.

## MULCHING

If impossible to thoroughly cultivate the orchard the area immediately around the trunk should be kept open and hoed often and a mulch of weeds, grass, leaves or manure can be used as a ground covering under the branches.

Select a proper site in planting an orchard. Climate, moisture, soil, exposure, air and water drainage, all must be considered.

Fruit does best on fertile, well-prepared soil, but some varieties can be grown on poor soils.

Select varieties adapted to your locality. Don't experiment.

Have a definite plan in setting out your orchard. Give your trees plenty of room.

Cultivate your orchard if possible; if you can't cultivate it, mulch it. Cultivation and mulching save moisture.

Grow cover crops if you can. Cover crops maintain soil fertility.

Don't neglect your trees and canes. Keep them properly pruned.

If you have an old orchard, save it. Make it pay.

Do not waste fruit after you have grown it. Store or can enough for winter and sell the surplus.

Keep your trees free of disease and insects. Know when to spray and how to spray—then spray.

## CONTROL OF BORERS

These pests of apple and peach trees must be killed by a wire thrust into their tunnels, disclosed by removing a few inches of dirt around the base of the tree. Go over your trees in April or May and in late August or September. After cutting out the borders mound up the dirt around the trunk about 6 inches high.



Line shows proper place to cut. Leaving stub as shown causes scar difficult to heal.

## PRUNING

The pruning of trees should begin when they are planted. The transplanting of a tree marks a very critical point of its life history, and to neglect careful and proper methods of planting and pruning at that time is to invite disaster or, at least, unsatisfactory returns from one's efforts.

**Apple and Pear**—Select from three to five of the branches to form the permanent head of the tree. These branches should be well distributed around the trunk, and at safe distance apart up and down the trunk. If two branches come out, one exactly opposite the other, forming a crotch, a split may occur at this weak point in later life, when the tree is full of fruit. Shorten these selected branches to about five buds, cutting the branches just above a bud that points outward. Remove all the other branches close to the trunk. Also shorten back two-thirds the central leader of the tree, if one exists, else the tree assumes a too upright growth for best results in later life.

**Cherry**—Five or six good limbs, well distributed around the trunk will be sufficient to form a well balanced top. The limbs left after pruning should not be cut back as severely as recommended for some other classes.

**Plum**—Cut back all branches to about two or three buds. After the tree has grown for a year, remove all but four or five branches, but do not cut these back. These limbs will form the permanent framework for the top and subsequent growth may be pruned to meet the requirements or taste of the planter.

## SMALL FRUITS

**Gooseberries and Currants**—Prepare the ground by deep plowing or spading. Cut the plants back fully one-half. Plant four feet apart both ways, same depth as plants stood in the nursery row, and firm soil well.

**Blackberries, Raspberries, Dewberries**—These should be set fairly deep, except one-year-old raspberry plants, the new growth of which starts from the crown in the mass of hair-like roots; these should be planted shallow, with the crown not more than one inch below the surface. Too deep planting is often fatal to one-year-old raspberry plants. Plant in rows five or six feet apart, with plants three to four feet apart in the row. Firm the dirt around each plant. Keep surface of ground loose. Water in dry weather during growing season. Mulch in winter after the ground is frozen.

**Strawberries**—Plants should be set and cared for the same as tomato and cabbage plants. Plant in rows three to three and one-half feet apart and twelve to fifteen inches in a row. The cheapest way to grow them is to plant in long rows and tend with a corn plow, using shields. Never allow rows to spread to more than eight or ten inches in width. Cover the plants late in the fall with one or two inches of prairie hay or stable litter (if free from weed seed). This covering should be removed from the plants in early spring and left between the rows until the fruit is picked, then it should be removed from the patch and the rows cultivated the same as before.

**Grapes**—These should be planted ten to twelve inches deep in holes large enough to admit roots without curling them, pressing soil solid about roots. Cut vines back to within three or four buds of the roots. Keep the ground clean by cultivating; if impossible to cultivate, mulch.

As the vine grows train to trellis.

Prune in February or early March, before there are any signs of new growth.

Cut back to two buds. The fruit of the grape is borne only on shoots of the current year's growth, which spring from the wood of last year's growth—hence the importance of annual and intelligent pruning.

**Asparagus**—Prepare ground by deep plowing or spading. Set plants twelve to eighteen inches each way, three inches deep, with roots well spread out. Every fall mulch the bed well with manure.

**Rhubarb**—Prepare ground as for asparagus. Set the plants with crown or eye two inches under ground. Plant three feet apart each way. Mulch in winter. Give clean cultivation the same as for any other crop.

## SHRUBS

If planted in beds or groups the ground should be spaded deeply and well worked. If shrubs are set as individual specimens they should be planted the same as trees.

Set shrubs at the same depth as they stood in the nursery row, or with their crowns at about the surface of the ground. Water the plants well during the hot, dry weather and keep the ground well stirred around them. Most shrubs require judicious pruning at planting time, and subsequently. When shrubs are planted it is advisable to cut them back from one-half to two-thirds with few exceptions.

Dig a strength 12 inches deep or more for setting hedges such as barberry and privet.

Early flowering shrubs should be pruned directly after blooming. Late flowering shrubs should be pruned in early spring while dormant. The early blooming shrubs produce bloom each year on the wood growth made the previous year. The late blooming shrubs produce bloom on the wood growth made the year of blooming.

## ROSES

If roses are planted in the ordinary way with the tops left exposed to the sun and drying winds of the spring, they are almost sure to shrivel before time for them to grow, and thus the plants are greatly endangered, while if the following suggestions are followed, success is almost certain. The plants should be unpacked as soon as received from the nursery and planted, if possible. If unable to plant them immediately upon receiving them, they should be heeled-in deep (buried) in moist, loose earth, waiting time to plant. In planting they should be set two inches deeper than they stood in the nursery in well-prepared, damp soil, but not wet enough to be muddy. If the soil is dry it is well to plant the roses solidly, then wet thoroughly and after the water has soaked away, throw up a small mound of earth five or six inches high around the plant. Then cut off the branches about one inch above the mound, leaving it this way for ten days or two weeks, or until the buds start and show a desire to grow, when the dirt mound can be raked down. Roses handled in this way hardly ever fail to make a good start and a very satisfactory growth.



Showing shrubs before and after pruning.

Note that all of the smallest branches are removed.

## PERENNIALS AND ROOTS

Prepare the ground by deep spading twelve to eighteen inches, and work it into a well pulverized condition.

**Peonies**—Should be set with the crown two to three inches below the surface of the ground. Plant two to two and one-half feet apart. Mulch heavily after the ground is frozen and remove mulch in the spring.

**Iris**—Should be set with the crown two inches below the surface. Plant twelve inches apart. Mulch as for Peonies.

**Phlox, etc.**—Set the crown one inch under the surface and spread out the roots. Firm well. Mulch in winter. Water in summer. Plant twelve inches apart. Gaillardia, Delphinium and other perennials should be planted about like Iris and Phlox.

## SHADE TREES

Dig holes large enough to accommodate all roots without bending or cramping. Fill the hole with good top dirt and firm it hard. When the hole is three-fourths full, allow a bucket or more of water to seep away around the roots, after which the hole may be entirely filled. It is well to mulch the tree immediately to prevent drying out. **Prune all limbs back  $\frac{1}{3}$  to  $\frac{1}{2}$  on an average.** Water trees during the summer months and give them plenty of attention until they have become well established. Large sizes of shade trees can often be staked to advantage until their roots have obtained good anchorage in the soil.

Trees which have been set several years and which are making little or no growth may respond to feeding with fertilizer. Apply as follows: Using a **crowbar**, make holes 15 inches deep and not more than 3 feet apart in an area circumscribed by the outer branches of the tree and continuing  $\frac{2}{3}$  rds of the distance to the trunk. A 10-20-10 fertilizer is recommended at the rate of  $\frac{1}{2}$  lb. per inch in tree trunk diameter. (Ammonium Sulphate can be used on mature trees at the same rate, but this material should be used with caution, and not at all on young trees.) The fertilizer is so divided that a small amount is placed in each hole and the soil is then replaced. Just before the buds begin to break in the spring is a good time to apply the fertilizer.

## SPRAYING

There are four distinct types of troubles to combat, i.e.: chewing insects, sucking insects, scale insects and fungous diseases. Chewing insects are controlled with a stomach poison, some form of arsenic (lead arsenate); sucking insects, (lice or aphids) by body contact poison, (nicotine) or miscible oil (kerosene emulsion); and fungous diseases by lime-sulphur solution or Bordeaux mixture. Be sure you know what you are spraying for since arsenate of lead will not control lice or aphids, nor will nicotine or kerosene emulsion control apple worms and neither of these will have any effect on apple scab or other fungous diseases. Lime-sulphur is used as a dormant spray for scale insects and also for fungous.

### SPRAYING MATERIALS

The most common and best form of arsenic used is "arsenate of lead." Thoroughly dissolve three pounds of paste arsenate of lead or  $1\frac{1}{2}$  pounds of dry arsenate of lead in a small amount of water in a pail and add to fifty gallons of water or other spraying solution.

Bordeaux mixture is prepared by dissolving four pounds of copper-sulphate (bluestone), in a small amount of water and diluting to twenty-five gallons;

slackening five to six pounds of good lime and adding water to make twenty-five gallons. These solutions should then be combined by pouring or dipping simultaneously from each into a third vessel or spray tank.

The commercial lime-sulphur is used almost exclusively by many fruit growers. This may be obtained from same sources as arsenate of lead or direct from manufacturers. To combine the fungous spray and the insect spray simply add the dissolved poisons to the fungous solutions.

Kerosene in its natural, undiluted state, is fatal to all insect and vegetable life, but properly prepared may be used safely and with much benefit: Dissolve a bar of Ivory soap in one gallon of hot water, then add two gallons of kerosene and churn it vigorously until cool. If made right it is then like cream, and will keep indefinitely. For general use take one part of the mixture to ten parts water and use as a spray. Will be found very valuable in getting rid of aphids, mealy bugs, red spider, etc. May be used against any soft-shelled insect.

For spraying on a small scale, commercial preparations of arsenate of lead, bordeaux mixture, nicotine ("Black Leaf 40") can be obtained at drug stores, seed and garden supply houses. Follow directions on containers.

## WHEN AND HOW TO SPRAY

### GRAPE

What to Spray for	Treatment	When to Spray	Remarks
Anthraconose Black Rot Mildews	Bordeaux mixture	(1) Just before buds open. (2) After blossoms have fallen. Two or three others at 10-14 day intervals.	Careful winter pruning and disposal of diseased wood with application of lime-sulphur (winter strength) in dormant season aids in anthraconose control.
Berry Moth Leaf Hopper	Bordeaux with 2 lbs. Arsenate of Lead.	Follow program recommended above when these insects are prevalent.	Dusting with fine sulphur is recommended for some vines of European origin for mildew control.

### BLACKBERRY, RASPBERRY AND DEWBERRY

Anthraconose	Lime-Sulphur as directed.	(1) In spring before growth starts ( $2\frac{1}{2}$ gal. in 50). (2) When new shoots are 6-8 inches high ( $1\frac{1}{4}$ gal. in 50). (3) Just before blooming period. Dilute as in (2).	
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### CURRENT AND GOOSEBERRY

Leaf Spot Anthraconose	Bordeaux	Beginning as soon as the leaves are opened make five to seven applications at two-week intervals.	
Current Worm	Arsenate of Lead, 2 lbs. to 50 gals. water.	At the first appearance of the worms. If there are two broods repeat spray.	Dry hellebore may be dusted on, if near picking time.
Current Plant Louse	Nicotine sulphate, 1 to 800 of water.	Soon after eggs hatch in spring (soon after the leaves open).	Thoroughness necessary, hitting all leaves from beneath.

## STRAWBERRY

What to Spray for	Treatment	When to Spray	Remarks
Leaf Spot	Bordeaux	Before blossoms open. Additional applications if spot appears.	Renew beds frequently. May mow off and burn foliage after berries are picked.

## APPLE

Scale Insects	Lime-Sulphur, 1 to 8; Scalecide. Miscible Oils	In dormant season; when trees are leafless.	Protect men and animals at work from caustic action of Lime-Sulphur on the skin.
Apple Aphids (lice)	Nicotine, 1 to 800, added to lime-sulphur, 1 to 40.	In spring when buds are bursting showing green tips.	Of no use after leaves are curled. Use high pressure.
Scab Black Rot Bud Moth Cankerworm Tent Caterpillar	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead	When flower buds show pink, but before any have opened. (Other sprays are recommended for codling moth, below, will incidentally control troubles in this group).	In severe cases of cankerworm use Paris Green 4 oz. in fifty gallons of water with twice as much slaked lime.
Codling Moth	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead.  Arsenate of Lead, 2 lbs. to 50 gals. water.	(1) When most of the petals have fallen (calyx spray). (2) Approximately three weeks after the bloom. (3) Approximately ten weeks after the bloom. (4) Fifteen to seventeen weeks after the bloom.	After weather becomes hot (from about July 1) discontinue lime-sulphur and use Bordeaux with 2 lbs. Arsenate of Lead.  Necessary in South where there may be three broods in one season.
Blotch Curculio	Lime-Sulphur, 1 to 40, with 2 lbs. Arsenate of Lead.  Bordeaux, 4-4-50, with 2 lbs. Arsenate of Lead.	(1) As in (2) under codling moth (above) except two weeks after bloom in south. (2) Approximately five weeks after the fall of the bloom. (3) As in (3) under codling moth (above).	Clean orcharding assists in curculio control. Spraying not always wholly effective.  Arsenate of Lead may be omitted if no curculio is present.
Sooty Blotch Fly Speck		Usually checked as incidental results of applications recommended above.	More common in regions where air and water drainage is poor.
Bitter Root	Bordeaux	Where disease is looked for begin spraying in early summer, making applications often enough to keep fruit coated.	
Apple Rust or Cedar Rust	Spraying not effective	Remove cedar trees nearby.	The rust cannot live without cedars on which it spends part of the year.
Blight		See under Pear, Fire Blight.	

## PEACH AND PLUM

San Jose Scale European Fruit Scale	Lime-Sulphur, 1 to 8.	When tree is dormant.	
Curculio Brown Rot Leaf Spot	Lime-Sulphur, 1 to 50, with 2 lbs. Arsenate of Lead.	Similar to cherry, which see.	Brown rot spreads very rapidly in warm, moist weather and can be controlled only if fruit is kept coated.

## PEAR

Fire Blight	Spraying ineffective	In some cases where particular care is taken, prompt and severe pruning at the first sign of blight, disinfecting tools and wounds with corrosive sublimate solution, may check its spread to some extent.	
Scale Insects Blister Mite Pear Psylla	Lime-Sulphur, 1 to 8; Scalecide. Miscible Oils.	In dormant season, preferably early spring.	Scrape dormant trees and burn all orchard trash to aid in psylla control.

Practically all the other common diseases and insects on the apple are also found on the pear to some extent. See methods of control under apple (above).

## CHERRY

Curculio Brown Rot Leaf Spot Shot Hole Fungus	Lime-Sulphur, 1 to 50, with 2 lbs. Arsenate of Lead.	(1) Just before buds open. (2) Immediately after blossoms fall. (3) About ten days after (2) (4) Additional sprays if necessary at two-week intervals.	In some localities it may be safer to dilute the lime-sulphur somewhat preventing foliage injury.
Cherry Aphid	Nicotine sulphate, 1 to 800.	When aphids first appear before they have caused the leaves to curl.	Be careful to cover underside of leaves. Use high pressure and soap.
Cherry Slug	Arsenate of Lead, 2 lbs. to 50 gals. water.	On first appearance of insects.	

## ROSES, FLOWERS AND VINE PLANTS

Slugs (small green worms on under side of rose leaf Aphids (plant lice) Mildew & Leaf Spot	$\frac{3}{4}$ pint "Black Leaf 40." 4 lbs. soap in 100 gals. water.  Bordeaux	Spring and Summer.  Spring and Summer, every 3 weeks	Spray whole plant thoroughly, especially under side of leaves.
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## SHADE TREES

Caterpillars Measuring Worms Canker Worms	3 lbs. Arsenate of Lead to 97 gals. water.	Spring and Summer.	
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